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January 28, 2009

Ms. Erin Brittain  
Project Manager  
Voluntary Remediation Program  
Office of Land Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204

Re: **Quarterly Monitoring Progress Report – 4<sup>th</sup> Quarter 2009**  
**Michigan Plaza**  
3801-3823 West Michigan Street  
Indianapolis, Indiana 46222  
IDEM Incident # 0000198  
IDEM VRP # 6061202  
MUNDELL Project No. M01046

Dear Ms. Brittain:

This *Quarterly Monitoring Progress Report* is being submitted to the Indiana Department of Environmental Management (IDEM) by MUNDELL & ASSOCIATES, INC. (MUNDELL), on behalf of AIMCO, to summarize further site characterization, remediation activities and quarterly monitoring performed from October 1 through December 31, 2009. The following sections provide detailed discussions of the results of this work. All activities were completed on schedule.

#### **IDEM MEETING - DECEMBER 16<sup>th</sup>, 2009**

Mr. Stephen Evanoff, Mr. John Mundell, and Ms. Leena Lothe met with Ms. Erin Brittain, Ms. Sarah Johansen, and Ms. Kristie McKinney of IDEM on December 16<sup>th</sup>, 2009 for a site update meeting. The following topics were discussed:

#### ***Topics Discussed***

- 1) CAP-18 treatment and the encouraging indicator compound trends in groundwater as detailed in the forthcoming sections.
- 2) Dramatically decreasing indoor air results at Michigan Plaza and Michigan Apartments.

- 3) Deep, upgradient monitoring wells have been purposefully located upgradient of *Source Areas B* and *C*. The impacts observed in these areas demonstrate groundwater impacts that are attributable to other upgradient, off-site sources and not to Michigan Plaza.
- 4) Additional soil characterization results (February 2009) as detailed in MUNDELL quarterly monitoring progress report – first quarter 2009.

In general, IDEM was in agreement with the Site characterization and remediation occurring at the Site.

## GROUNDWATER MONITORING NETWORK SAMPLING

On November 2<sup>nd</sup> to 4<sup>th</sup>, 2009, quarterly groundwater sampling of the existing twenty-four (24) monitoring wells established with IDEM, and the two (2) additional monitoring wells on the Floral Park Cemetery property was performed. The following constitute this quarterly groundwater monitoring network:

- 1) *Twenty-four MUNDELL monitoring wells*: MMW-1S, MMW-8S, MMW-9S, MMW-10S, MMW-11S, MMW-11D, MMW-12S, MMW-13D, MMW-14D, MMW-P-01, MMW-P-02, MMW-P-03S, MMW-P-03D, MMW-P-04, MMW-P-05, MMW-P-06, MMW-P-07, MMW-P-08, MMW-P-09S, MMW-P-09D, MMW-P-10S, MMW-P-10D, and MMW-C-01 and MMW-C-02 (MUNDELL wells on Floral Park Property)
- 2) *Two (2) Keramida monitoring wells*: MW-168S and MW-168D.

MUNDELL also measured static groundwater elevations via an electric oil/water interface probe from the following additional wells this quarter:

- 1) MUNDELL monitoring wells MMW-2S, MMW-3S, MMW-4D, MMW-5D, MMW-6D, and MMW-7S. The purpose of this ‘all monitoring wells gauging event’ in November 2009 was to more accurately determine the groundwater flow direction and gradient over this wider area.

MUNDELL measured static groundwater elevations via an electric oil/water interface probe from the following four nests of Keramida monitoring wells surrounding the Plaza Property for the purpose of more accurately determining the groundwater flow direction and gradient.

- 2) *Eight (8) Keramida monitoring wells*: MW-167S, MW-167D, MW-169S, MW-169D, MW-170S, MW-170D, MW-171S and MW-171D.

During this investigation, monitoring well MMW-P-04 was found to contain black flakes at the top of the water table. The side of the well casing had black residue sticking to it. A one inch PVC pipe (five foot screen at the bottom followed by riser pipe above the screen) was inserted in this 2-inch well, and the sample was collected from the one-inch PVC pipe. All monitoring well

sampling, survey and construction data are provided in **Tables 1, 2 and 2a**, respectively, and the potentiometric map is illustrated in **Figure 1**.

The wells were sampled utilizing the dedicated bladder pumps for uniform low-flow purging and sample collection. The Troll 9500 multi-parameter meter (used inline with the dedicated bladder pumps) logs geochemical parameters (temperature, pH, dissolved oxygen, conductivity, and oxidation reduction potential), which help remove a minimal but sufficient amount of water (indicated by stabilization of geochemical parameters) to sample the well. The Troll helps assess the geochemical parameters as evidence of conditions naturally conducive to natural attenuation existing in the aquifer. All excess purge water was transported to 55-gallon drums located at the Site for proper disposal.

As agreed in the October 29<sup>th</sup>, 2008 meeting with IDEM, and detailed in the *RWP Addendum November 2008*, groundwater samples were submitted to Pace Analytical Laboratories (Pace) in Indianapolis, Indiana for the shorter list of VOC analysis via U.S. EPA SW-846 Method 8260, along with appropriate duplicate (DUP), matrix spike (MS) and matrix spike duplicate (MSD). Groundwater samples were transferred into three 40-milliliter glass sample vials containing the preservative hydrochloric acid (HCl). Groundwater sample vials were sealed in plastic bags and placed in a cooler containing ice and delivered to Pace using appropriate chain-of-custody protocol for laboratory tests. Pace laboratory certificates of analysis for the groundwater samples analyzed are presented in **Appendix A**.

Baseline groundwater geochemical parameters (pH, dissolved oxygen, oxidation-reduction potential, conductivity, and temperature) were measured with a low-flow cell and multi-parameter water quality probe in the post-injection period to evaluate whether aquifer conditions continue to be favorable for natural attenuation of the indicator compounds at the Site.

Additional aquifer chemical parameter testing has been performed in the past and will be scheduled based on the observed response and remedial status in each plume area going forward. Additional aquifer parameters including methane, ethene, and ethane are periodically analyzed to evaluate indicator compound breakdown and redox-sensitivity. In addition, volatile fatty acids (VFA) will also be tested periodically to evaluate substrate distribution and lifetime duration of the product. These samples will be collected in select monitoring wells representative of each plume to monitor the presence of residual CAP 18<sup>TM</sup> in the aquifer and to provide additional monitoring of aquifer conditions. Future monitoring of these constituents will be performed as needed to evaluate the natural attenuation process.

The purge water from the monitoring wells was placed in 55-gallon drums located at the Site for later disposal. In accordance with IDEM guidelines, the contents in each drum were then identified with a label describing them as non-hazardous materials.

## GROUNDWATER ANALYTICAL RESULTS

Groundwater analytical testing results for this quarter are summarized in **Table 3** and presented on **Figure 2**. Two (2) out of the twenty-six (26) monitoring wells sampled this quarter (MMW-1S and MMW-P-01) showed PCE concentrations exceeding the IDEM RISC Industrial Default Closure Level (IDEM RISC IDCL). Three (3) monitoring wells (MMW-10S, MMW-P-02, and MMW-C-01) demonstrated PCE concentrations exceeding the IDEM RISC Residential Default Closure Level (IDEM RISC RDCL) but below the IDCL. The historical groundwater results are included in **Table 4**. The historical indicator compounds trends in groundwater are presented in **Figure 3**.

Two (2) of the monitoring wells (MMW-1S and MMW-P-01) showed TCE concentrations exceeding the IDEM RISC IDCL, with one (1) monitoring well (MMW-10S) exhibiting level exceeding the RDCL, but below the IDCL.

Four (4) monitoring wells (MMW-9S, MMW-P-01, and MMW-P-04, and MMW-P-10D) showed cis-1,2-DCE concentrations exceeding the IDEM RISC IDCL. Ten (10) monitoring wells (MMW-1S, MMW-10S, MMW-11D, MMW-13D, MMW-14D, MMW-P-03S, MMW-P-06, MMW-P-07, MMW-P-08, and MMW-C-01) exhibited cis-1,2-DCE concentrations exceeding the RDCL, but below the IDCL.

Twenty-one (21) monitoring wells (MMW-1S, MMW-8S, MMW-9S, MMW-10S, MMW-11D, MMW-12S, MMW-13D, MMW-14D, MMW-P-01, MMW-P-02, MMW-P-03S, MMW-P-03D, MMW-P-04, MMW-P-06, MMW-P-07, MMW-P-08, MMW-P-09D, MMW-P-10S, MMW-P-10D, MW-168D, and MMW-C-01) showed vinyl chloride concentrations exceeding the IDEM RISC IDCL. One (1) monitoring well (MMW-P-05) exhibited a vinyl chloride concentration slightly exceeding the RDCL, but below the IDCL.

The deep monitoring wells MMW-13D and MMW-14D exhibited significant cis-1,2-DCE and vinyl exceedances above the IDCLs during this quarter (see **Figures 3** and **4**). Since these wells have been purposefully located upgradient of *Source Areas B* and *C*, the impacts observed in these areas demonstrate groundwater impacts that are attributable to other upgradient, off-site sources and not to Michigan Plaza. As seen on **Figures 2, 3** and **4**, the indicator compound concentrations at these deep, upgradient wells can be considered as “background levels” defined as the concentration of contaminants from the Genuine source coming into the deeper aquifer in this area. These indicator compound levels aid in discerning between the Michigan Plaza source impacts and the Genuine Site impacts, and will ultimately be used to evaluate the target cleanup levels for the deeper aquifer at the Site.

The indicator compound trends demonstrated at the northern wells (MMW-3S, MMW-4D, MMW-5D, MMW-6D and MMW-7S) at Michigan Apartments are attached in **Appendix C**. The cis-1,2-DCE and vinyl chloride concentrations coming onsite from the upgradient sources are still well above the RISC IDCLs in most of the northern wells (at the northern fence line)

indicating that the remediation at the upgradient property will require multiple additional years to achieve acceptable cleanup levels.

## IN-SITU BIOREMEDIATION PROGRESS

Based upon the 1) the extent and severity of the indicator compound concentrations and trends, 2) site-specific operational constraints and uses, 3) geochemical and physical characteristics of the aquifer, and 4) economic factors, in-situ bioremediation with CAP18™ (an enhanced, food-grade vegetable oil product), followed by Monitored Natural Attenuation (MNA) is the selected remediation technology for the Site for treating groundwater, as detailed in the RWP. The initial CAP18™ injection was performed in all the three source areas in August 2007 using a direct push Geoprobe system. Locations and spacing of the injection points were designed to address the sewer line related *Chemical Source Areas* and provide injection locations in each *Chemical Source Area* that upon migration downgradient in the direction of groundwater flow, are expected to remediate the most significant groundwater impacts. A booster CAP-18ME injection was performed in February 2009 to aggressively treat some areas where the chemical concentrations have begun to stabilize or are decreasing at a slow rate. During this quarter, no additional CAP-18ME injections have been performed.

### ***Indicator Chemical Trends***

A group of monitoring wells from the sampling network is utilized to monitor dissolved indicator compound concentration trends over time at various locations within the heart of the three *Chemical Source Areas*. Graphs of historical PCE, TCE, cis-1,2-DCE and vinyl chloride concentrations are developed for the following monitoring wells:

***Source Area A:*** MMW-P-03D

***Source Area B:*** MMW-P-01, MMW-P-07, MMW-P-08, and MMW-8S

***Source Area C:*** MMW-1S, MMW-9S, and MMW-10S

**Figures 3 and 4** illustrate the changes in the chlorinated solvents concentrations demonstrating reductive dechlorination as a result of the CAP-18 remediation implementation. To illustrate the effect of the CAP-18 injection on dissolved chlorinated concentrations, injection dates are included on the graphs.

PCE and cis-1,2-DCE impacts in ***Source Area A*** (MMW-P-03D) appear to have a decreasing trend, and vinyl chloride demonstrated an increasing trend after the second round of CAP-18 injection in February 2009. This is indicative of continued reductive dechlorination in this area (indicating further breakdown of parent compounds) in *Source Area A*.

PCE impacts in the ***Source Area B*** (MMW-P-01, MMW-8S, and MMW-P-07) have significantly decreased, with corresponding increases in the cis-1,2-DCE (MMW-P-07) and vinyl chloride (MMW-P-01 and MMW-8S) concentrations this quarter. This is indicative of reductive dechlorination in *Source Area B*. There was a slight increase in the PCE concentration in

monitoring well MMW-8S immediately after injection during the fourth quarter of 2007, followed by a decreasing trend in the first quarter of 2008, accompanied by a spike in cis-1,2-DCE and vinyl chloride concentrations. The PCE concentration has significantly decreased in monitoring well MW-8S since then, although it was slightly higher immediately after injection. A spike in cis-1,2-DCE and vinyl chloride concentrations occurred after the first injection, following by decreasing cis-1,2-DCE trends and stable vinyl chloride trends up to the 2<sup>nd</sup> injection event. The analytical results are attached in **Appendix A**.

PCE impacts in the **Source Area C** (MMW-1S, and MMW-9S) appear to have a decreasing trend this quarter, and vinyl chloride demonstrated a decreasing trend for this quarter, with the exception of MMW-1S. Cis-1,2-DCE concentrations were slightly increasing this quarter in MMW-1S, MMW-9S and MMW-10S. This is indicative of continued reductive dechlorination in **Source Area C**.

Thus, an overall decreasing trend in PCE and TCE concentrations (in some areas achieving nondetectable concentrations), and an increase in the daughter product concentrations (indicating breakdown of parent compounds via reductive dechlorination) has occurred significantly since the CAP-18 injection in the **Source Areas A, B and C** in August 2007.

This second round of CAP-18<sup>ME</sup> injection (completed in February 2009) was completed to allow for PCE concentrations to be reduced more effectively in areas that contain higher levels of chlorinated organics. This booster injection was conducted in **Source Area C** (west - southwest of Apartment Building No. 1, **Source Area B** (plaza parking lot), and **Source Area A** (beneath the plaza building during soil sampling activities) to further remediate the plumes. Changes in concentrations resulting from this second round of injections will be able to be better evaluated over the next several quarters.

## INDOOR AIR MITIGATION SYSTEMS PERFORMANCE

Four sub-floor slab depressurization units were installed by *Air Quality Control (AQC)* under the oversight of MUNDELL in September 2006. Three additional sub-floor slab depressurization units were installed by AQC under the oversight of MUNDELL on March 19 and 26, 2008. Unit/blowers were installed in the following spaces at Michigan Plaza: 1) the Village Pantry (B1), 2) the former Handicap Space (B2), 3) the Mexican Store (B3), and 4) the Laundromat (B4). The systems installed at the Michigan Apartments are: Building No. 1, Basement Apartment 101 (B5), Building No. 6, Basement Apartment 602 (B6), and Building No. 10, Basement Apartment 1001 (B7). The system locations are illustrated in **Figure 5**.

Since the time of installation, system stack air samples were collected weekly for a few weeks followed by bi-weekly sampling for a month, monthly for a quarter and then on a quarterly basis thereafter. PID readings have also been concurrently measured in each of the stacks. The historical PCE concentration trends and cumulative pounds of PCE and total contaminants removed by each of the systems (B1 through B7) are summarized in **Figures 6 through 14**.

As of the fourth quarter of 2009, approximately *11.67 pounds* of PCE and *13.71 pounds* of total chlorinated solvents have been removed at the *Michigan Apartments property* (sub slab depressurization systems **B5**, **B6** and **B7**); and approximately *83.57 pounds* of PCE and *89.25 pounds* of total chlorinated solvents have been removed at the *Michigan Plaza property* (sub slab depressurization systems **B1**, **B2**, **B3** and **B4**). The associated calculations are provided in **Appendix B**. A concentration of half the PQL (practical quantitation limit) is assumed for the indicator compounds demonstrating concentrations below the laboratory (PQL) with the exception of vinyl chloride where an average concentration of 0.15 PPMV (derived from the J flag values for VC concentrations below PQL) is used for calculation purposes.

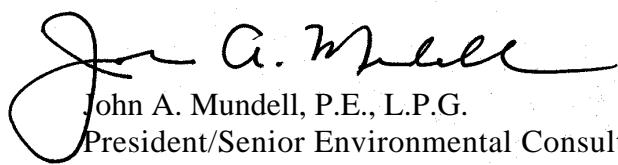
We appreciate the opportunity to update IDEM on the progress of remedial activities and monitoring at the Site. If you have any questions, please don't hesitate to contact us at (317) 630-9060 or via email ([jmundell@MundellAssociates.com](mailto:jmundell@MundellAssociates.com); [llothe@MundellAssociates.com](mailto:llothe@MundellAssociates.com)).

Sincerely,

**MUNDELL & ASSOCIATES, INC.**



Leena A. Lothe  
Project Environmental Engineer



John A. Mundell, P.E., L.P.G.  
President/Senior Environmental Consultant

Attachments:    Tables  
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cc:        Mr. Eric Hilty, AIMCO

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## APPENDICES

Appendix A. Lab Analytical Results

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## **TABLES**

**Table 1**  
**Tabulated Water Level Measurements**  
**Quarter 4 (2009)**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

Monitoring Well	Date of Water Level	Top of Casing Elevation (feet MSL)	Total Depth (feet)	Depth To Water (feet)	Groundwater Elevation (feet MSL)
<b>On-Site Monitoring Wells</b>					
MMW-P-01	11/2/2009	714.903	28	19.07	695.83
MMW-P-02	11/2/2009	715.686	30	20.19	695.50
MMW-P-03S	11/2/2009	715.6	28	20.05	695.55
MMW-P-03D	11/2/2009	715.582	35	20.06	695.52
MMW-P-04*	11/2/2009	715.492	28	19.91	695.58
MMW-P-05	11/2/2009	715.17	28	19.44	695.73
MMW-P-06	11/2/2009	715.721	28	20.05	695.67
MMW-P-07	11/2/2009	714.471	28	18.19	696.28
MMW-P-08	11/2/2009	714.142	28	17.8	696.34
MMW-P-10S	11/2/2009	713.941	28	17.76	696.18
MMW-P-10D	11/2/2009	714.05	38	18	696.05
<b>Off-Site Monitoring Well (Olin-Cossell ROW)</b>					
MMW-P-09S	11/2/2009	714.447	28	19.9	694.55
MMW-P-09D	11/2/2009	714.394	45	19.82	694.57
<b>Off-Site Monitoring Wells (Keramida)</b>					
MW-167S	11/2/2009	716.25	22	19	697.75
MW-167D	11/2/2009	716.25	33	19	697.6
MW-168S	11/2/2009	714.79	22	18	696.99
MW-168D	11/2/2009	714.71	31	18	696.96
MW-169S	11/2/2009	715.95	25	20	695.54
MW-169D	11/2/2009	715.23	37	20	694.78
MW-170S	11/2/2009	717.40	27	21	696.18
MW-170D	11/2/2009	717.34	39	21	696.22
MW-171S	11/2/2009	711.83	22	16	696.15
MW-171D	11/2/2009	711.88	49	16	695.75
<b>Off-Site Monitoring Wells (Michigan Meadows Apartments)</b>					
MMW-1S	11/2/2009	712.54	20	15.73	696.81
MMW-2S	11/2/2009	712.588	20	DRY	DRY
MMW-3S	11/2/2009	709.763	30	12.37	697.393
MMW-4D	11/2/2009	710.877	66	13.39	697.487
MMW-5D	11/2/2009	710.852	51	13.17	697.682
MMW-6D	11/2/2009	711.971	51	14.21	697.761
MMW-7S	11/2/2009	711.64	26	13.81	697.83
MMW-8S	11/2/2009	713.81	24	16.8	697.01
MMW-9S	11/2/2009	713.249	25	17.04	696.209
MMW-13D	11/2/2009	712.884	50	15.76	697.124
MMW-14D	11/2/2009	711.77	50	14.9	696.87
<b>Monitoring Wells Installed 2008</b>					
MW-C-01	11/2/2009	715.272	28	19.85	695.422
MW-C-02	11/2/2009	714.22	28	19.25	694.97

\* This well has been corrected for 3.77 of cap 18 (density of 0.96) oil in well

**Table 2**  
**Monitoring Well Construction Summary**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

Monitoring Well	Date Installed	Date of Water Level	*Top of Casing Elevation (feet MSL)	Total Depth (feet)	Screened Interval (feet)			Depth To Water (feet)	Groundwater Elevation (feet MSL)
MMW-P-01	09/28/05	9/19/07	715.79	28.00	18.00	-	28.00	19.69	696.10
MMW-P-02	09/27/05	9/19/07	716.70	30.00	20.00	-	30.00	20.90	695.80
MMW-P-03S	09/26/05	9/19/07	716.55	28.00	18.00	-	28.00	20.79	695.76
MMW-P-03D	09/27/05	9/19/07	716.45	35.00	25.00	-	35.00	20.63	695.82
MMW-P-04	09/26/05	9/19/07	716.27	28.00	18.00	-	28.00	20.49	695.78
MMW-P-05	09/26/05	9/19/07	716.12	28.00	18.00	-	28.00	20.14	695.98
MMW-P-06	09/28/05	9/19/07	716.50	28.00	18.00	-	28.00	20.57	695.93
MMW-P-07	01/11/07	9/19/07	715.30	28.00	18.00	-	28.00	18.84	696.46
MMW-P-08	01/11/07	9/19/07	715.22	28.00	18.00	-	28.00	18.61	696.61
MMW-P-09S	01/29/07	9/19/07	715.36	28.00	18.00	-	28.00	20.17	695.19
MMW-P-09D	05/31/07	9/19/07	715.21	45.00	35.00	-	45.00	20.35	694.86
MMW-P-10S	06/01/07	9/19/07	714.59	28.00	18.00	-	28.00	18.30	696.29
MMW-P-10D	06/01/07	9/19/07	714.98	38.00	28.00	-	38.00	18.69	696.29

Note: The top of casing elevation for each well was determined assuming a surveyed top of casing elevation of 712.54 ft elevation given in the Keramida Phase II Investigation Report dated March 2002 for well MW 165S (located along Michigan Meadows Apartments northern property line) and a surveyed top of casing elevation of 711.88 ft for well MW-171D located east-southeast of Michigan Plaza on Olin Avenue.

**Table 2a**  
**Monitoring Well Construction Summary**  
**Michigan Apartments**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

Monitoring Well	Date Installed	Date of Water Level	*Top of Casing Elevation (feet MSL)	Total Depth (feet)	Screened Interval (feet)			Depth To Water (feet)	Groundwater Elevation (feet MSL)
MMW-1S	8/20/04	9/19/07	713.66	20.00	10.00	-	20.00	16.36	697.30
MMW-8S	1/11/07	9/19/07	714.75	24.00	14.00	-	24.00	17.41	697.34
MMW-9S	1/12/07	9/19/07	714.09	25.00	15.00	-	25.00	17.45	696.64
MMW-10S	1/12/07	9/19/07	713.23	25.00	15.00	-	25.00	16.17	697.06
MMW-11D	5/31/07	9/19/07	713.69	33.00	23.00	-	33.00	16.43	697.26
MMW-11S	11/26/08	NM	713.64	24.00	14.00	-	24.00	NM	NA
MMW-12S	11/26/08	NM	712.82	28.00	18.00	-	28.00	NM	NA
MMW-13D	11/21/08	NM	713.53	50.00	35.00	-	50.00	NM	NA
MMW-14D	12/10/08	NM	712.61	50.00	40.00	-	50.00	NM	NA

Note: The top of casing elevation for each well was determined assuming a surveyed top of casing elevation of 712.54 ft elevation given in the Keramida Phase II Investigation Report dated March 2002 for well MW 165S (located along Michigan Meadows Apartm

NM: Not Measured

NA: Not Available

**Table 3**  
**Monitoring Well Groundwater Analytical Results**  
**Quarter 4 (2009)**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
<b>Monitoring Wells (Apts)</b>							
MMW-1S	11/2/2009	189	39.0	119	<5.0	<5.0	26.6
MMW-8S	11/2/2009	<5.0	<5.0	58.3	<5.0	<5.0	277
MMW-9S	11/2/2009	<5.0	<5.0	5,410	120	<5.0	1,050
MMW-10S	11/2/2009	12.8	10.1	239	5.6	<5.0	119
MMW-11S	11/2/2009	<5.0	<5.0	59.9	<5.0	<5.0	<2.0
MMW-11D	11/2/2009	<5.0	<5.0	771	31.8	<5.0	18.8
MMW-12S	11/2/2009	<5.0	<5.0	28.8	<5.0	<5.0	7.1
MMW-13D	11/2/2009	<5.0	<5.0	949	<5.0	<5.0	182
MMW-14D	11/2/2009	<5.0	<5.0	541	9.2	<5.0	83.8
<b>Monitoring Wells (Plaza)</b>							
MMW-P-01	11/3/2009	103	58.3	9,330	<50.0	<50.0	4,770
MMW-P-02	11/3/2009	11.1	<5.0	60.1	<5.0	<5.0	73.9
MMW-P-03S	11/3/2009	<5.0	<5.0	141	16.1	<5.0	379
MMW-P-03D	11/3/2009	<5.0	<5.0	8.5	<5.0	<5.0	168
MMW-P-04	11/3/2009	<5.0	<5.0	1,190	36.9	<5.0	90.9
MMW-P-05	11/3/2009	<5.0	<5.0	7.6	<5.0	<5.0	2.7
MMW-P-06	11/3/2009	<5.0	<5.0	107	15.2	<5.0	292
MMW-P-07	11/3/2009	<5.0	<5.0	809	14.1	<5.0	1,510
MMW-P-08	11/3/2009	<50.0	<50.0	86.7	<50.0	<50.0	2,860
MMW-P-09S	11/3/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
MMW-P-09D	11/3/2009	<5.0	<5.0	<5.0	<5.0	<5.0	87.1
MMW-P-10S	11/3/2009	<5.0	<5.0	29.6	<5.0	<5.0	288
MMW-P-10D	11/3/2009	<5.0	<5.0	2,740	<5.0	<5.0	3,500
<b>Keramida Monitoring Wells (Off-site)</b>							
MW-168S	NS	NS	NS	NS	NS	NS	NS
MW-168D	11/4/2009	<5.0	<5.0	<5.0	<5.0	<5.0	99.1
<b>Floral Park Monitoring Wells (Off-site)</b>							
MMW-C-01	11/3/2009	12.6	<5.0	211	8.9	<5.0	2,720
MMW-C-02	11/3/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
IDE� RISC Default Industrial Cleanup Level		55	31	1,000	2,000	1,000	4
IDE� RISC Default Residential Cleanup Level		5	5	70	100	80	2

Note:

All Values Over IDE� RISC Default Industrial Cleanup Level in RED

All Values Over IDE� RISC Default Residential Cleanup Level in BLUE

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

NS = Not Sampled

**Table 4**  
**Historical Monitoring Well Groundwater Analytical Results**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
<b>Monitoring Wells (Apts)</b>							
MMW-1S	9/10/2004	3.1 J	< 5.0	< 5.0	< 5.0	<5.0	4.1
	3/15/2005	150	10	< 5.0	< 5.0	<5.0	<2.0
	11/9/2005	130	8.3	< 5.0	< 5.0	<5.0	8.9
	9/5/2006	200	13	< 5.0	< 5.0	<5.0	4.6
	2/22/2007	220	14.9	< 5.0	< 5.0	<5.0	<2.0
	6/14/2007	240	< 5.0	< 5.0	< 5.0	<5.0	<2.0
	9/19/2007	362	10.5	< 5.0	< 5.0	31.6	<2.0
	12/13/2007	330	8.1	< 5.0	< 5.0	27	<2.0
	3/21/2008	280	14	< 5.0	< 5.0	<5.0	<2.0
	6/6/2008	277	13.2	< 5.0	< 5.0	<5.0	<2.0
	9/11/2008	288	14.7	< 5.0	< 5.0	<5.0	<2.0
	11/20/2008	223	45.5	169	< 5.0	<5.0	14.5
	3/16/2009	199	11.3	< 5.0	< 5.0	<5.0	<2.0
	6/16/2009	237	13.4	< 5.0	< 5.0	<5.0	<2.0
	8/5/2009	195	22.9	71.3	< 5.0	<5.0	9.3
MMW-2S	11/2/2009	189	39.0	119	< 5.0	<5.0	26.6
	9/10/2004	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<2.0
	11/9/2005	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	5.2
	9/5/2006	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	5.2
	6/2/2008	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<2.0
MMW-3S	6/15/2009	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<2.0
	8/26/2004	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<2.0
	9/10/2004	< 5.0	5.2	< 5.0	< 5.0	<5.0	<2.0
	11/9/2005	< 5.0	28	5.4	< 5.0	<5.0	<2.0
	9/5/2006	< 5.0	23	7.4	< 5.0	<5.0	<2.0
	6/2/2008	< 5.0	20.2	7.9	< 5.0	<5.0	2.8
MMW-4D	6/15/2009	< 5.0	15.3	11.7	< 5.0	<5.0	3
	8/25/2004	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<2.0
	9/10/2004	< 5.0	< 5.0	980	< 5.0	<5.0	200
	11/10/2005	< 5.0	< 5.0	850	< 5.0	<5.0	240
	9/5/2006	< 5.0	< 5.0	1,100	2.3J	<5.0	220
	6/2/2008	< 5.0	< 5.0	515	< 5.0	<5.0	32.2
MMW-5D	6/15/2009	< 5.0	< 5.0	892	7	<5.0	142
	8/24/2004	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<2.0
	9/10/2004	< 5.0	< 5.0	3,400	13	<5.0	270
	11/10/2005	< 5.0	< 5.0	3,900	19	<5.0	140
	9/5/2006	< 50	< 50	2,500	<50	<5.0	170
	6/2/2008	< 5.0	< 5.0	1,360	19.9	<5.0	207
MMW-6D	6/15/2009	< 5.0	< 5.0	1,110	14.5	<5.0	242
	9/10/2004	< 5.0	< 5.0	540	< 5.0	<5.0	400
	11/10/2005	< 5.0	< 5.0	750	< 5.0	<5.0	700
	9/5/2006	< 5.0	< 5.0	300	< 5.0	<5.0	440
	6/2/2008	< 5.0	< 5.0	65.5	< 5.0	<5.0	242
MMW-7S	6/15/2009	< 5.0	< 5.0	8.6	< 5.0	<5.0	111
	8/24/2004	< 5.0	< 5.0	28	< 5.0	<5.0	<2.0
	9/10/2004	< 5.0	< 5.0	8.5	< 5.0	<5.0	<2.0
	11/9/2005	< 5.0	< 5.0	9.5	< 5.0	<5.0	<2.0
	9/5/2006	< 5.0	< 5.0	5.8	< 5.0	<5.0	4.5
	6/2/2008	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<2.0
IDEM RISC Default Industrial Cleanup Level - 2006		55	31	1,000	2,000	1,000	4
		5	5	70	100	80	2

Note:

All Values Over IDEM RISC Default Industrial Cleanup Level in **RED**

All Values Over IDEM RISC Default Residential Cleanup Level in **BLUE**

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

Green Shading indicates areas that appear to be undergoing reductive dechlorination due to CAP-18 Injections

"J" designation indicates concentration was estimated due to high concentration of one parameter requiring dilution on other parameter quantitations

"-" indicates geochemical parameter was not collected, "NV" indicates data was not valid due to equipment error

**Table 4**  
**Historical Monitoring Well Groundwater Analytical Results**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
MMW-8S	2/22/2007	114	<5.0	289	13.8	<5.0	40.6
	6/14/2007	15.9	<5.0	364	9.5	<5.0	82.1
	9/19/2007	<5.0	<5.0	778	24.6	<5.0	145
	12/13/2007	7.7	<5.0	1,000	7.4	<5.0	586
	3/20/2008	<5.0	<5.0	470	<5.0	<5.0	330
	6/6/2008	<5.0	<5.0	336	<5.0	<5.0	509
	9/10/2008	<5.0	<5.0	275	<5.0	<5.0	322
	11/20/2008	<5.0	<5.0	123	<5.0	<5.0	584
	3/16/2009	<5.0	<5.0	95	<5.0	<5.0	348
	6/16/2009	<5.0	<5.0	94.3	6.1	<5.0	280
	8/5/2009	<5.0	<5.0	83.8	<5.0	<5.0	261
	11/2/2009	<5.0	<5.0	58.3	<5.0	<5.0	277
MMW-9S	2/22/2007	782	88.6	78.9	<5.0	<5.0	<2.0
	6/14/2007	858	85.7	65.3	<5.0	<5.0	<2.0
	9/20/2007	1,430	112	70.3	8.2	<5.0	<2.0
	12/12/2007	37.9 J	17.9 J	1,700	29.8 J	<50.0	<20.0
	3/21/2008	57	20	2,900	39	<5.0	16
	6/6/2008	52.9	28	1,540	38.2	<5.0	295
	9/10/2008	52.6	22.7	4,920	94.5	<5.0	167
	11/20/2008	<5.0	<5.0	5,820	90.2	<5.0	1,010
	3/16/2009	<50.0	<50.0	7,490	73.8	<50.0	1,800
	6/16/2009	44.5	24.9	4,810	64	<5.0	876
	8/5/2009	<5.0	<5.0	5,010	64.2	<5.0	1,110
	11/2/2009	<5.0	<5.0	5,410	120	<5.0	1,050
MMW-10S	2/22/2007	49.6	<5.0	<5.0	<5.0	<5.0	<2.0
	6/14/2007	77.6	<5.0	<5.0	<5.0	<5.0	<2.0
	9/19/2007	66	<5.0	<5.0	<5.0	<5.0	<2.0
	12/12/2007	124	56	149	<5.0	<5.0	<2.0
	3/21/2008	440	12	8.1	<5.0	<5.0	12
	6/6/2008	541	62.1	218	<5.0	<5.0	30.4
	9/10/2008	6.9	<5.0	353	8.2	<5.0	<2.0
	11/20/2008	<5.0	<5.0	212	<5.0	<5.0	15.9
	3/16/2009	<5.0	<5.0	302	<5.0	<5.0	114
	6/16/2009	22.8	15.4	415	12	<5.0	81.4
	8/5/2009	<5.0	<5.0	224	5.5	<5.0	156
	11/2/2009	12.8	10.1	239	5.6	<5.0	119
MMW-11S	6/14/2007	<5.0	<5.0	225	6.8	<5.0	18.6
	9/19/2007	<5.0	<5.0	442	21.1	<5.0	30.1
	12/13/2007	7.2	<5.0	920	27	<5.0	49
	3/20/2008	<5.0	<5.0	420	17	<5.0	4.9
	6/5/2008	<5.0	<5.0	623	23.1	<5.0	26.7
	9/10/2008	<5.0	<5.0	327	18.3	<5.0	9.9
	11/20/2008	<5.0	<5.0	554	23.9	<5.0	18.5
	3/16/2009	<5.0	<5.0	37.6	<5.0	<5.0	<2.0
	6/16/2009	<5.0	<5.0	253	17.9	<5.0	2.8
	8/5/2009	<5.0	<5.0	80.7	5.5	<5.0	3.1
	11/2/2009	<5.0	<5.0	59.9	<5.0	<5.0	<2.0
MMW-11D	6/16/2009	<5.0	<5.0	25.3	6.7	<5.0	<2.0
	8/5/2009	<5.0	<5.0	485	22.6	<5.0	15.3
	11/2/2009	<5.0	<5.0	771	31.8	<5.0	18.8
MMW-12S	6/16/2009	<5.0	<5.0	9.7	<5.0	<5.0	6.5
	8/5/2009	<5.0	<5.0	47.3	<5.0	<5.0	15.2
	11/2/2009	<5.0	<5.0	28.8	<5.0	<5.0	7.1
MMW-13D	8/5/2009	<5.0	<5.0	672	<5.0	<5.0	59.2
	11/2/2009	<5.0	<5.0	949	<5.0	<5.0	182
MMW-13D Low	6/16/2009	<5.0	<5.0	613	10.4	<5.0	17.3
MMW-13D Medium (29')	6/16/2009	<5.0	<5.0	578	12.1	<5.0	14.9
MMW-13D High (17')	6/16/2009	<5.0	<5.0	597	9.7	<5.0	21.1
MMW-14D	6/16/2009	<5.0	<5.0	648	15.6	<5.0	57.6
	8/5/2009	<5.0	<5.0	589	10.9	<5.0	79.1
	11/2/2009	<5.0	<5.0	541	9.2	<5.0	83.8
IDEML RISC Default Industrial Cleanup Level - 2006		55	31	1,000	2,000	1,000	4
IDEML RISC Default Residential Cleanup Level - 2006		5	5	70	100	80	2

Note:

All Values Over IDEML RISC Default Industrial Cleanup Level in RED

All Values Over IDEML RISC Default Residential Cleanup Level in BLUE

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

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**Table 4**  
**Historical Monitoring Well Groundwater Analytical Results**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
<b>Monitoring Wells (Plaza)</b>							
MMW-P-01	11/9/2005	33	210	160	9.6	<5.0	76
	2/22/2007	85.2	356	274	16.7	<5.0	28.7
	6/14/2007	111	368	350	10	<5.0	79.6
	9/20/2007	206	322	300	11.5	<5.0	127
	12/14/2007	230	320	240	7.1	<5.0	87
	3/21/2008	120	170	3,100	25	<5.0	42
	6/5/2008	22	31.5	3,660	68.6	<5.0	123
	9/11/2008	14.2	15.1	1,690	<5.0	<5.0	87.7
	11/19/2008	<5.0	<5.0	4,320	<5.0	<5.0	116
	3/17/2009	17.5	22.6	12,300	143	<5.0	3,290
	6/17/2009	<50.0	<50.0	4,020	63.9	<50.0	1,840
	8/6/2009	97.4	37.0J	12,200	<50.0	<50.0	3,730
	11/3/2009	103	58.3	9,330	<50.0	<50.0	4,770
MMW-P-02	11/8/2005	24	<5.0	87	7.3	<5.0	49
	2/22/2007	184	<5.0	39.4	<5.0	<5.0	27.4
	6/14/2007	17.1	<5.0	35	<5.0	<5.0	27.5
	9/19/2007	13.3	<5.0	66.3	5.6	<5.0	50.1
	12/13/2007	7.8	<5.0	69	<5.0	<5.0	53
	3/20/2008	19	<5.0	67	<5.0	<5.0	42
	6/5/2008	94.9	<5.0	44	<5.0	<5.0	46.4
	9/11/2008	17.5	<5.0	46.6	<5.0	<5.0	42
	11/19/2008	10.7	<5.0	75.4	<5.0	<5.0	69.5
	3/17/2009	23.4	<5.0	65.4	5.3	<5.0	68.4
	6/17/2009	5.1	<5.0	54.2	9.2	<5.0	80.6
	8/6/2009	5.1	<5.0	55.8	<5.0	<5.0	56.2
	11/3/2009	11.1	<5.0	60.1	<5.0	<5.0	73.9
MMW-P-03S	11/9/2005	110	<5.0	97	9.6	<5.0	<2.0
	2/22/2007	397	<5.0	105	10	<5.0	<2.0
	6/14/2007	256	<5.0	96.4	9.2	<5.0	9.3
	9/20/2007	144	<5.0	131	15.8	<5.0	16
	12/13/2007	67	<5.0	88	5.3	<5.0	15
	3/20/2008	130	<5.0	84	7.3	<5.0	10
	6/5/2008	19.4	<5.0	380	14.9	<5.0	10.6
	9/11/2008	<5.0	<5.0	<5.0	<5.0	<5.0	72.6
	11/19/2008	<5.0	6	494	<5.0	<5.0	40.8
	3/17/2009	7.5	<5.0	904	38.7	<5.0	283
	6/17/2009	<5.0	<5.0	332	22.3	<5.0	759
	8/6/2009	30.6	8.2	573	25	<5.0	843
	11/3/2009	<5.0	<5.0	141	16.1	<5.0	379
MMW-P-03D	11/9/2005	22	<5.0	42	<5.0	<5.0	2
	2/22/2007	48.9	<5.0	57.8	<5.0	39	15.6
	6/14/2007	21.7	<5.0	74.9	<5.0	<5.0	34.5
	9/19/2007	14.3	<5.0	76.1	7.3	<5.0	36.6
	12/13/2007	11	<5.0	40	<5.0	<5.0	20
	3/20/2008	<5.0	<5.0	170	6	<5.0	18
	6/5/2008	<5.0	<5.0	150	7.4	<5.0	26
	9/11/2008	<5.0	<5.0	95.7	6.4	<5.0	<2
	11/19/2008	<5.0	<5.0	80.6	<5.0	<5.0	36.9
	3/17/2009	<5.0	<5.0	65.2	<5.0	<5.0	69.8
	6/17/2009	<5.0	<5.0	14.9	5.9	<5.0	137
	8/6/2009	<5.0	<5.0	16.7	<5.0	<5.0	248
	11/3/2009	<5.0	<5.0	8.5	<5.0	<5.0	168
MMW-P-04	11/9/2005	180	<5.0	<5.0	<5.0	<5.0	<2.0
	2/22/2007	315	<5.0	<5.0	<5.0	<5.0	<2.0
	6/14/2007	268	<5.0	<5.0	<5.0	<5.0	<2.0
	9/20/2007	214	<5.0	<5.0	<5.0	<5.0	<2.0
	12/13/2007	62	<5.0	<5.0	<5.0	<5.0	<2.0
	3/20/2008	120	<5.0	<5.0	<5.0	<5.0	<2.0
	6/6/2008	154	6	59.7	<5.0	<5.0	<2.0
	9/11/2008	31.9	<5.0	360	7.1	<5.0	<2.0
	11/19/2008	45	<5.0	248	<5.0	<5.0	<2.0
	3/18/2009	19.4	5.4	304	10.8	<5.0	<2.0
	6/17/2009	35.3	5.4	827	22	<5.0	2
	8/6/2009	<5.0	<5.0	15.1	<5.0	<5.0	<2.0
	11/5/2009	<5.0	<5.0	1190	36.9	<5.0	90.9
IDEML RISC Default Industrial Cleanup Level - 2006		55	31	1,000	2,000	1,000	4
IDEML RISC Default Residential Cleanup Level - 2006		5	5	70	100	80	2

Note:

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All Values Over IDEML RISC Default Residential Cleanup Level in BLUE

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

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**Historical Monitoring Well Groundwater Analytical Results**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
MMW-P-05	11/8/2005	<5.0	<5.0	6.2	<5.0	<5.0	<2.0
	2/22/2007	23.7	<5.0	9.1	<5.0	<5.0	<2.0
	6/14/2007	<5.0	<5.0	18.8	<5.0	<5.0	<2.0
	9/19/2007	<5.0	<5.0	18.8	<5.0	<5.0	<2.0
	12/14/2007	<5.0	<5.0	14.8	<5.0	<5.0	<2.0
	3/20/2008	<5.0	<5.0	8.1	<5.0	<5.0	<2.0
	6/5/2008	<5.0	<5.0	15.6	<5.0	<5.0	<2.0
	9/11/2008	<5.0	<5.0	16.7	<5.0	<5.0	<2.0
	11/19/2008	<5.0	<5.0	22.1	<5.0	<5.0	<2.0
	3/17/2009	<5.0	<5.0	13.7	<5.0	<5.0	<2.0
	6/17/2009	<5.0	<5.0	10.9	6.6	<5.0	<2.0
	8/6/2009	<5.0	<5.0	15.1	<5.0	<5.0	<2.0
	11/3/2009	<5.0	<5.0	7.6	<5.0	<5.0	2.7
MMW-P-06	11/8/2005	<5.0	<5.0	200	24	<5.0	21
	2/22/2007	<5.0	<5.0	158	19.2	<5.0	<2.0
	6/14/2007	<5.0	<5.0	214	22.7	<5.0	13.3
	9/19/2007	<5.0	<5.0	283	38.2	<5.0	26.1
	12/14/2007	<5.0	<5.0	260	40	<5.0	31
	3/20/2008	<5.0	<5.0	250	31	<5.0	26
	6/5/2008	<5.0	<5.0	265	30.9	<5.0	40.1
	9/11/2008	<5.0	<5.0	271	33.3	<5.0	<2.0
	11/19/2008	<5.0	<5.0	292	<5.0	<5.0	61.4
	3/17/2009	<5.0	<5.0	292	35.3	<5.0	<2.0
	6/17/2009	<5.0	<5.0	145	22.2	<5.0	90.6
	8/6/2009	<5.0	<5.0	136	14.3	<5.0	301
	11/3/2009	<5.0	<5.0	107	15.2	<5.0	292
MMW-P-07	2/22/2007	3,060	81.5	82	8.8	<5.0	<2.0
	6/14/2007	2,850	90	82.5	<50.0	<50.0	<20.0
	9/20/2007	5,200	109	121	16.1	<5.0	2
	12/13/2007	1,440	157	930	8.8	7.4	80
	3/21/2008	31	7.6	1,700	27	<5.0	110
	6/5/2008	<5.0	<5.0	938	15.6	<5.0	466
	9/11/2008	<5.0	<5.0	1,870	55.2	<5.0	1,620
	11/19/2008	<5.0	<5.0	797	<5.0	<5.0	749
	3/17/2009	<5.0	<5.0	361	17.7	<5.0	1,830
	6/17/2009	<5.0	<5.0	87.1	9.4	<5.0	1,130
	8/6/2009	<5.0	<5.0	48.7	<5.0	<5.0	787
	11/3/2009	<5.0	<5.0	809	14.1	<5.0	1,510
MMW-P-08	2/22/2007	6,280	281	240	26.7	<5.0	<2.0
	6/14/2007	6,440	310	169	<50.0	<50.0	<20.0
	9/20/2007	9,780	494	201	25.3	<5.0	6.5
	12/14/2007	390	210	5,800	<50.0	<50.0	<20.0
	3/21/2008	6.7	11	6,500	130	<5.0	55
	6/5/2008	<5.0	<5.0	<5.0	<5.0	<5.0	562
	9/11/2008	5.8	5	18,300	686	<50.0	4,740
	11/19/2008	<50.0	<50.0	5,690	91.4	<50.0	13,000
	3/17/2009	<5.0	<5.0	1,130	47.1	<5.0	5,680
	6/17/2009	<125	<125	356	145	<5.0	7,200
	8/6/2009	<125	<125	601	<50.	<50.	8,960
	11/3/2009	<50.0	<50.0	86.7	<50.0	<50.0	2,860
MMW-P-09S	2/22/2007	10.0	<5.0	<5.0	<5.0	<5.0	<2.0
	6/14/2007	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	9/19/2007	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	12/12/2007	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	3/20/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	6/5/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	9/11/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	11/19/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	3/17/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	6/16/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	8/6/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	11/3/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
IDEML RISC Default Industrial Cleanup Level - 2006		55	31	1,000	2,000	1,000	4
IDEML RISC Default Residential Cleanup Level - 2006		5	5	70	100	80	2

Note:

All Values Over IDEML RISC Default Industrial Cleanup Level in RED

All Values Over IDEML RISC Default Residential Cleanup Level in BLUE

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

Green Shading indicates areas that appear to be undergoing reductive dechlorination due to CAP-18 Injections

"J" designation indicates concentration was estimated due to high concentration of one parameter requiring dilution on other parameter quantitations

"-" indicates geochemical parameter was not collected, "NV" indicates data was not valid due to equipment error

**Table 4**  
**Historical Monitoring Well Groundwater Analytical Results**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
MMW-P-09D	6/14/2007	<5.0	<5.0	<5.0	<5.0	<5.0	46.2
	9/19/2007	<5.0	<5.0	<5.0	<5.0	<5.0	83.1
	12/12/2007	<5.0	<5.0	<5.0	<5.0	<5.0	71
	3/20/2008	<5.0	<5.0	<5.0	<5.0	<5.0	3
	6/5/2008	<5.0	<5.0	<5.0	<5.0	<5.0	100
	9/11/2008	<5.0	<5.0	<5.0	<5.0	<5.0	72.6
	11/19/2008	<5.0	<5.0	<5.0	<5.0	<5.0	97.2
	3/17/2009	<5.0	<5.0	<5.0	<5.0	<5.0	85.1
	6/16/2009	<5.0	<5.0	<5.0	<5.0	<5.0	73.5
	8/6/2009	<5.0	<5.0	<5.0	<5.0	<5.0	80.8
MMW-P-10S	11/3/2009	<5.0	<5.0	<5.0	<5.0	<5.0	87.1
	6/14/2007	36.1	36.3	61.6	6.9	<5.0	<2.0
	7/6/2007	87.9	54.9	92.1	10.2	<5.0	<2.0
	9/19/2007	192	82.6	126	14.4	<5.0	<2.0
	12/14/2007	71	<5.0	<5.0	<5.0	<5.0	2.4
	3/20/2008	26.8	19.2	250	12.2	<5.0	<2.0
	6/5/2008	15	9.7	537	16	<5.0	114
	9/11/2008	74.8	36.5	1,650	74	<5.0	27.7
	11/19/2008	78.6	28	1,510	<5.0	<5.0	22.3
	3/17/2009	11.9	8.6	1,160	71.5	<5.0	<2.0
	6/17/2009	<5.0	<5.0	331	20.5	<5.0	63.9
	8/6/2009	<5.0	<5.0	158	16.1	<5.0	395
MMW-P-10D	11/3/2009	<5.0	<5.0	29.6	<5.0	<5.0	288
	6/14/2007	<5.0	10.6	481	7.7	<5.0	98.7
	7/6/2007	<5.0	<5.0	498	9	<5.0	118
	9/19/2007	<5.0	<5.0	350	<5.0	<5.0	76.1
	12/14/2007	<5.0	<5.0	270	<5.0	<5.0	77
	3/20/2008	<5.0	<5.0	<5.0	<5.0	<5.0	3
	6/5/2008	<5.0	<5.0	508	<5.0	<5.0	267
	9/11/2008	<5.0	<5.0	435	<5.0	<5.0	288
	11/19/2008	<5.0	<5.0	3,390	<5.0	<5.0	5,030
	3/17/2009	<5.0	<5.0	4,860	12.9	<5.0	2,500
	6/17/2009	<5.0	<5.0	3,710	9.6	<5.0	9,070
	8/6/2009	<5.0	<5.0	2,520	5.1	<5.0	3,400
	11/3/2009	<5.0	<5.0	2,740	<5.0	<5.0	3,500
IDEML RISC Default Industrial Cleanup Level - 2006		55	31	1,000	2,000	1,000	4
IDEML RISC Default Residential Cleanup Level - 2006		5	5	70	100	80	2

Note:

All Values Over IDEML RISC Default Industrial Cleanup Level in **RED**

All Values Over IDEML RISC Default Residential Cleanup Level in **BLUE**

PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

Green Shading indicates areas that appear to be undergoing reductive dechlorination due to CAP-18 Injections

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**Table 4**  
**Historical Monitoring Well Groundwater Analytical Results**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

**Historical Monitoring Well Groundwater Analytical Results**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Job No.: M01046**

Well ID	Sample Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	Vinyl chloride
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
<b>Keramida Monitoring Wells (Off-site)</b>							
MW-167S	11/7/2005	<5.0	<5.0	<5.0	<5.0	<5.0	14
	6/5/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	6/17/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
MW167D	11/7/2005	<5.0	<5.0	750	<5.0		110
	6/5/2008	<5.0	<5.0	616	28	<5.0	43.8
	6/17/2009	<5.0	<5.0	612	22.1	<5.0	23.8
MW-168S	11/7/2005	280	16	53	<5.0	<5.0	3
	2/21/2007	30.1	8.8	155	<5.0	<5.0	29.6
	6/14/2007	<5.0	<5.0	40.8	<5.0	<5.0	34
	9/19/2007	32.6	8	82.4	<5.0	<5.0	3.5
	12/13/2007	52	14	78	<5.0	<5.0	4.1
	3/20/2008	92	12	46	<5.0	<5.0	4.2
	6/5/2008	80.4	10.1	41.1	<5.0	<5.0	3.6
	9/11/2008	68.5	10.8	66.9	<5.0	<5.0	5.5
	8/7/2009	62.6	10.2	118	<5.0	NS	9.9
	11/4/2009	<5.0	<5.0	<5.0	<5.0	<5.0	49
MW-168D	11/7/2005	<5.0	<5.0	6.8	<5.0	<5.0	58.1
	2/21/2007	<5.0	<5.0	8.4	<5.0	<5.0	47.5
	6/14/2007	<5.0	<5.0	5.2	<5.0	<5.0	89.7
	9/19/2007	<5.0	<5.0	<5.0	<5.0	<5.0	74
	12/12/2007	<5.0	<5.0	<5.0	<5.0	<5.0	39
	3/20/2008	<5.0	<5.0	8	<5.0	<5.0	65.9
	6/5/2008	<5.0	<5.0	13.4	<5.0	<5.0	<2
	9/11/2008	<5.0	<5.0	5.5	<5.0	<5.0	<2.0
	3/17/2009	<5.0	<5.0	16.5	<5.0	<5.0	14.5
	6/18/2009	<5.0	<5.0	<5.0	<5.0	<5.0	36.2
MW-169S	8/7/2009	<5.0	<5.0	<5.0	<5.0	<5.0	99.1
	11/4/2009	<5.0	<5.0	<5.0	<5.0	NA	<2.0
MW-169D	11/7/2005	<5.0	<5.0	<5.0	<5.0	<5.0	5.1
	6/5/2008	<5.0	<5.0	<5.0	<5.0	<5.0	14.3
MW-170S	6/3/2008	<5.0	<5.0	<5.0	<5.0	<5.0	5.5
	6/17/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
MW-170D	6/3/2008	<5.0	<5.0	<5.0	<5.0	<5.0	230
	6/17/2009	<5.0	<5.0	<5.0	<5.0	<5.0	174
MW-171S	6/3/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
MW-171D	6/3/2008	<5.0	<5.0	<5.0	<5.0	<5.0	3
	6/16/2009	<5.0	<5.0	<5.0	<5.0	<5.0	2.2
<b>Floral Park Cemetery Wells (Off-site)</b>							
MMW-C-01	11/20/2008	15.7	8.3	296	<5.0	<5.0	<2.0
	3/17/2009	<5.0	<5.0	508	7.3	<5.0	<2.0
	6/18/2009	23.2	<5.0	<5.0	<5.0	<5.0	<2.0
	8/6/2009	84.8	<5.0	66.9	<5.0	<5.0	35.2
	11/3/2009	12.6	<5.0	211	8.9	<5.0	2,720
MMW-C-02	11/20/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	3/17/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	6/18/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	8/6/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
	11/3/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0
<b>IDEM RISC Default Industrial Cleanup Level - 2006</b>		55	31	1,000	2,000	1,000	4
<b>IDEM RISC Default Residential Cleanup Level - 2006</b>		5	5	70	100	80	2

Note:

All Values Over IDEM RISC Default Industrial Cleanup Level in **RED**

All Values Over IDEM RISC Default Residential Cleanup Level in **BLUE**

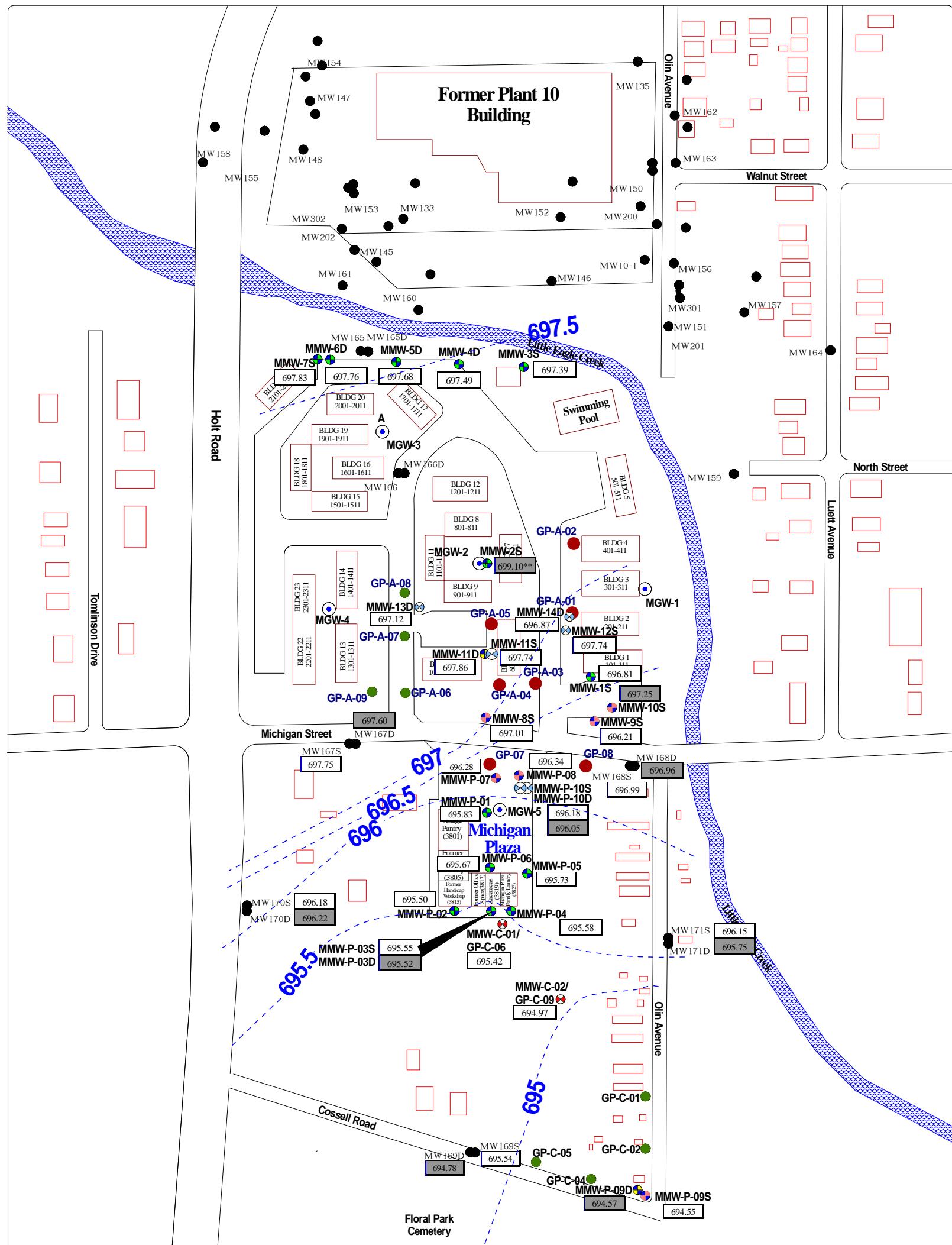
PCE = Tetrachloroethene; TCE = Trichloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene; trans-1,2-DCE = trans-1,2-Dichloroethene

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## **FIGURES**



## LEGEND

- MW 160 ● Keramida Monitoring Wells  
 SS-P-01 ● MUNDELL Sewer Sampling Locations (September & November 2005)  
 GP-07 ● MUNDELL Soil Boring Locations (September 2005)  
 MMW-P-06 ● MUNDELL Monitoring Wells, Michigan Plaza (September 2005)  
 GP-C-05 ● MUNDELL Soil Boring Locations (January 2007)  
 MMW-P-07 ● MUNDELL Monitoring Wells (January 2007)  
 MMW-P-09D ● MUNDELL Monitoring Wells (May-June 2007)  
 MMW-C-01/ GP-C-06 ● MUNDELL Monitoring Wells (August 2008)  
 GP-C-06 ● MUNDELL Monitoring Wells (September 2008)  
 MMW-11S ✕ Keramida Monitoring Well Locations Referenced from Keramida Environmental, Inc.  
 Project Number: M01046  
 Drawing File: Base Map.SKF  
 Date Prepared: 12/29/09  
 Scale: 1"=200'±
- Water Level as Measured on November 2, 2009 (gray boxes indicate groundwater elevation values not used for the creation of the Potentiometric Surface Map)
- Potentiometric Surface Equal Potential Lines

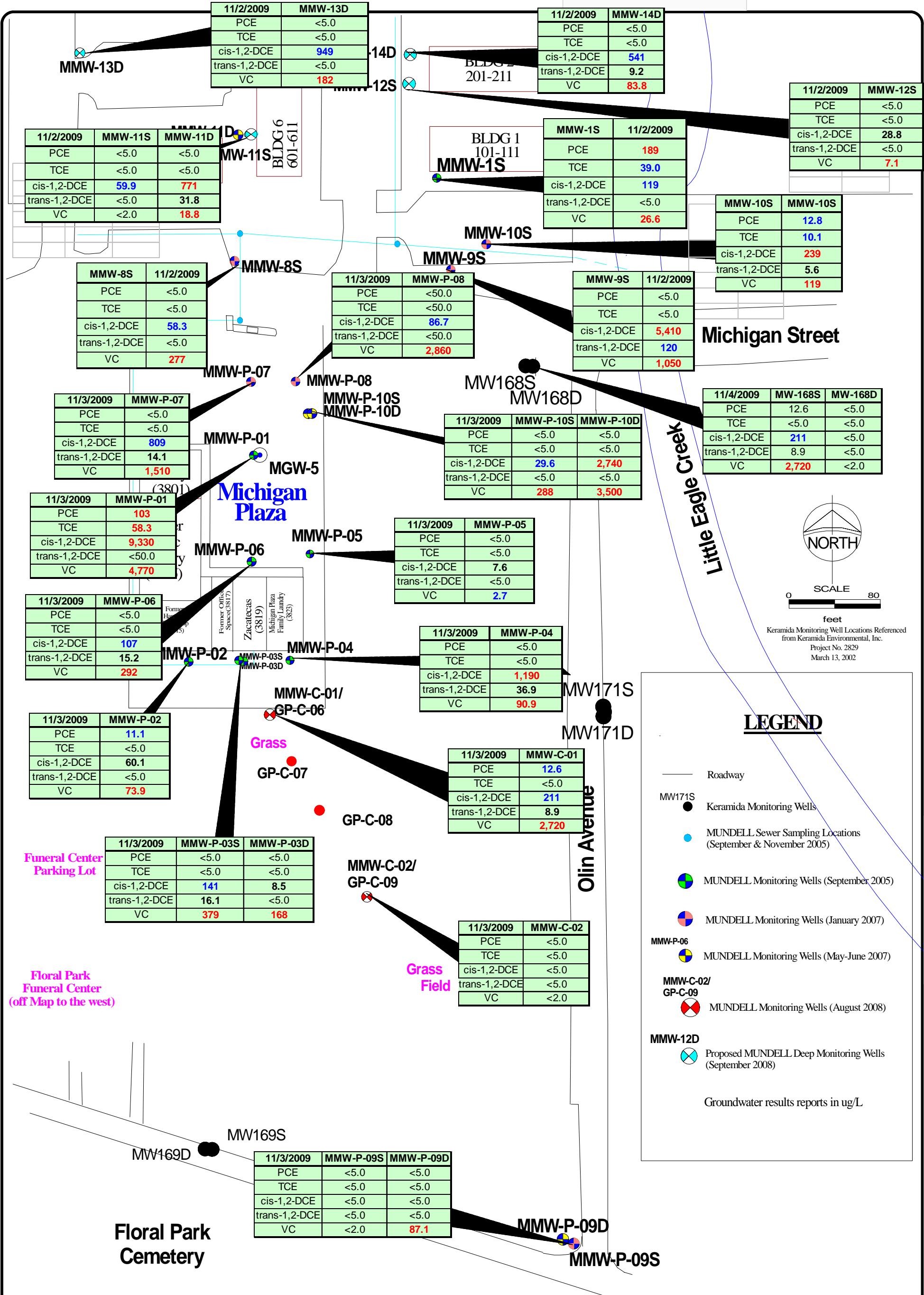
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Consulting Professionals for the Earth & Environment

110 South Downey Avenue  
Indianapolis, Indiana 46219-6406  
317-630-9060, fax 317-630-9065

**Shallow Potentiometric Surface Map**  
**November 2, 2009**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**

**FIGURE**  
**1**



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317-630-9060, fax 317-630-9065*

Project Number:  
M01046

## M01046

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### Drawing File:

Date Prepared:

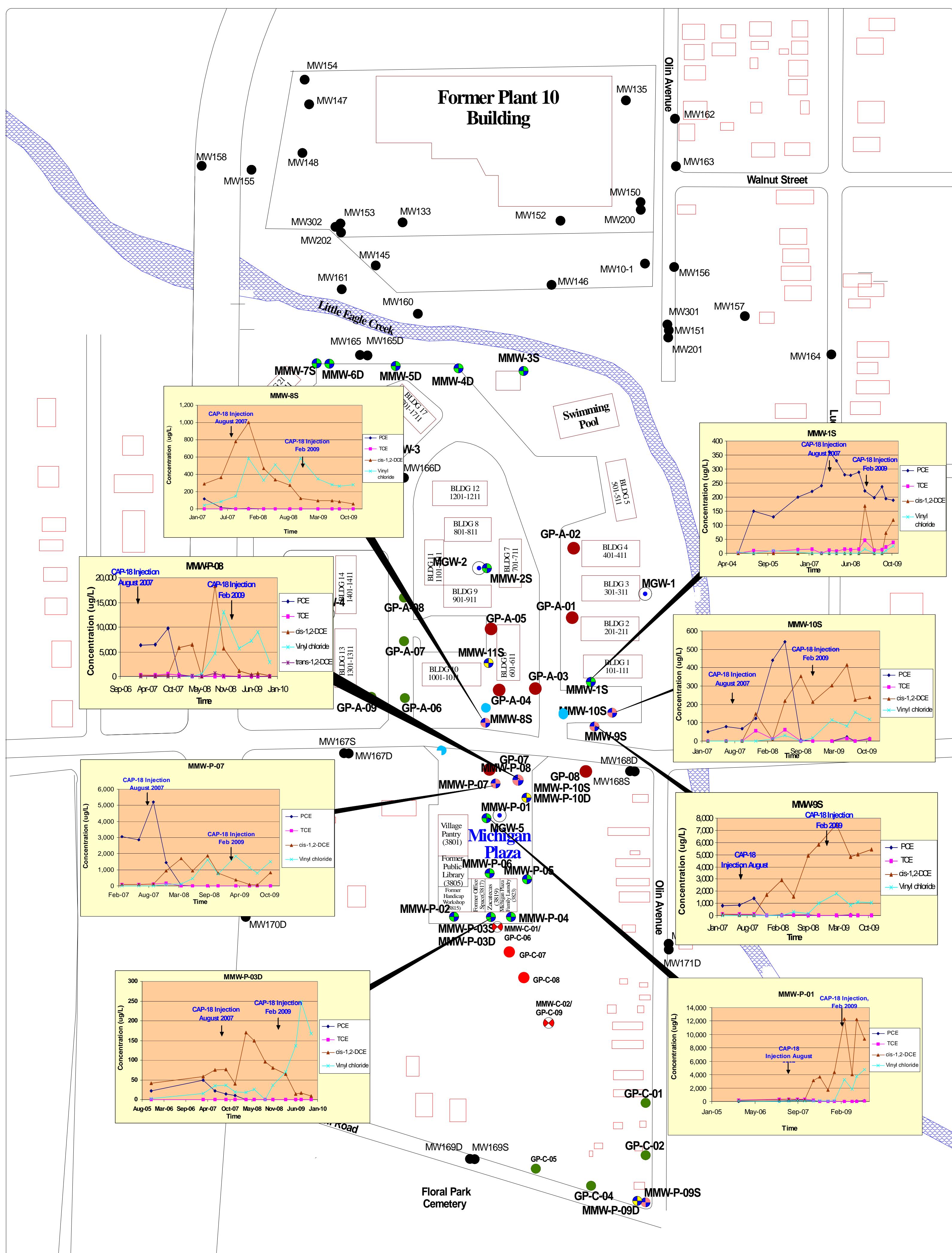
12/30/07

## GROUNDWATER ANALYTICAL RESULTS

## **GROUNDWATER ANALYTICA**

**Fourth Quarter 2005**  
Michigan Plaza  
3801-3823 West Michigan Street  
Indianapolis, Indiana

# FIGURE 2



### LEGEND

- Mundell Test Pit (TP-3) Sampling Locations (April 2005)
- Sewer Excavation Sampling Locations (October 2007)
- Fence
- Sewer Line
- MWW-11S** MUNDELL Monitoring Wells (May-June 2007)
- MW160** Keramida Monitoring Wells
- SS-P-01** MUNDELL Sewer Sampling Locations/manholes (September & November 2005)
- GP-07** MUNDELL Soil Boring Locations (September 2005)
- MWW-P-06** MUNDELL Monitoring Wells, Michigan Plaza (September 2005)
- GP-C-04** MUNDELL Soil Boring Locations (January 2007)
- MWW-P-07** MUNDELL Monitoring Wells (January 2007)
- MWW-C-01** MUNDELL Monitoring Wells (July/August 2008)
- GP-C-06** MUNDELL Soil Boring Locations (July/August 2008)



SCALE  
feet

Keramida Monitoring Well Locations Referenced from Keramida Environmental, Inc.  
Project No. 2829  
March 13, 2002

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Consulting Professionals for the Earth & Environment

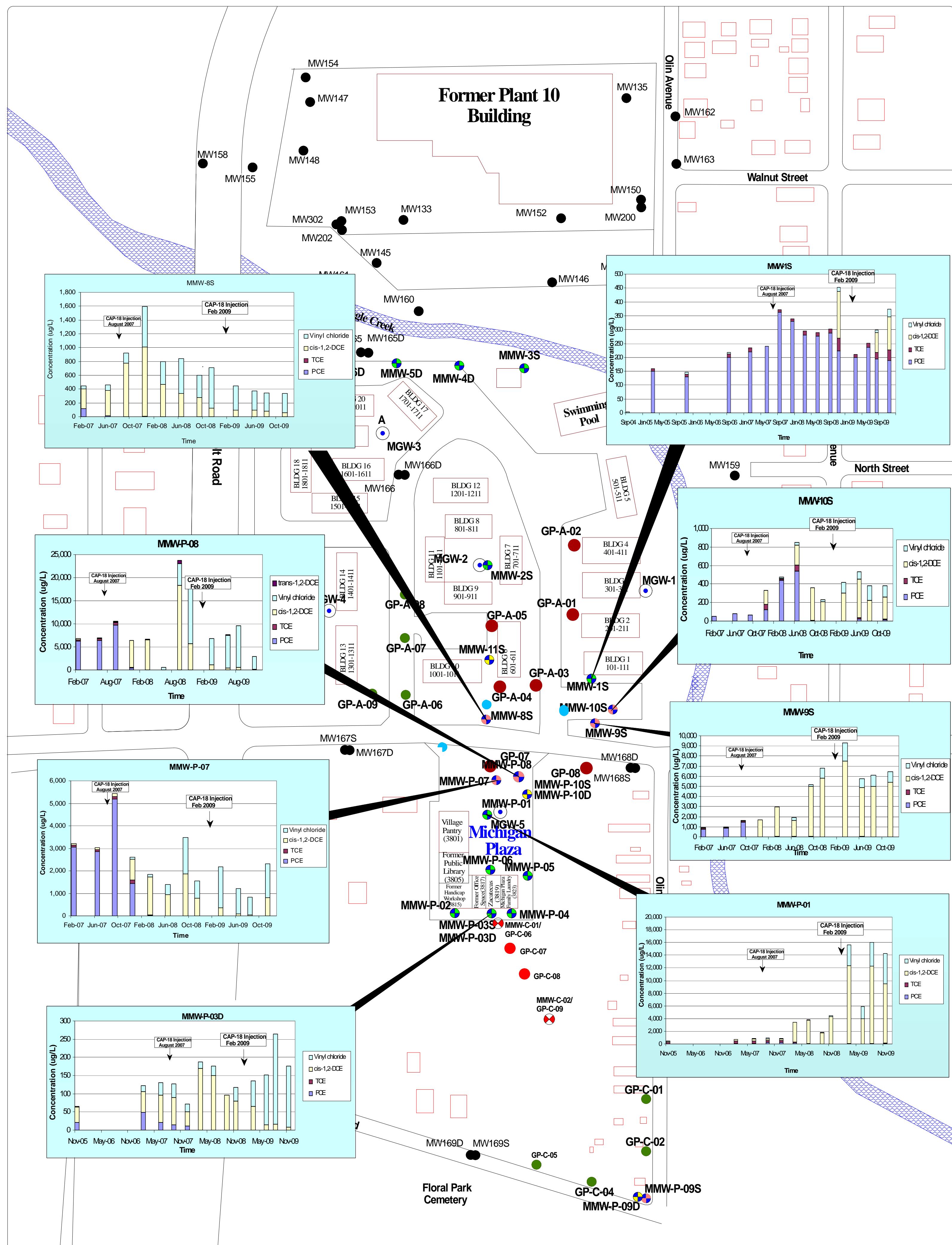
110 South Downey Avenue  
Indianapolis, Indiana 46219-6406  
317-630-9060, fax 317-630-9065

Project Number:  
M01046  
Drawing File:  
Base Map.SKF  
Date Prepared:  
6/2/2009  
Scale:

Indicator Compound Trends in Groundwater  
Fourth Quarter 2009  
Michigan Plaza  
3801-3823 West Michigan Street  
Indianapolis, Indiana

FIGURE

3



# LEGEND

- ## LEGEND
- Mundell Test Pit (TP-3) Sampling Locations (April 2005)
  - Sewer Excavation Sampling Locations (October 2007)
  - Fence
  - Sewer Line
  - MMW-11S**  MUNDELL Monitoring Wells (May-June 2007)
  - MW160  Keramida Monitoring Wells
  - SS-P-01**  MUNDELL Sewer Sampling Locations/manholes (September & November 2005)
  - GP-07**  MUNDELL Soil Boring Locations (September 2005)
  - MMW-P-06**  MUNDELL Monitoring Wells, Michigan Plaza (September 2005)
  - GP-C-04**  MUNDELL Soil Boring Locations (January 2007)
  - MMW-P-07**  MUNDELL Monitoring Wells (January 2007)
  - MMW-C-01** MUNDELL Monitoring Wells (July/August 2008)
  - GP-C-06** MUNDELL Soil Boring Locations (July/August 2008)

## feet

### Keramida Monitoring Well Locations Referenced from Keramida Environmental, Inc.

Project No. 282  
March 12, 2002

March 13, 2002

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# MUNDELL & ASSOCIATES, INC.

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*110 South Downey Avenue  
Indianapolis, Indiana 46219-6406*

**Project Number:  
M01046**

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**Drawing File:  
Base Map.SKF**

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**Date Prepared:  
6/2/2009**

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**Scale:**

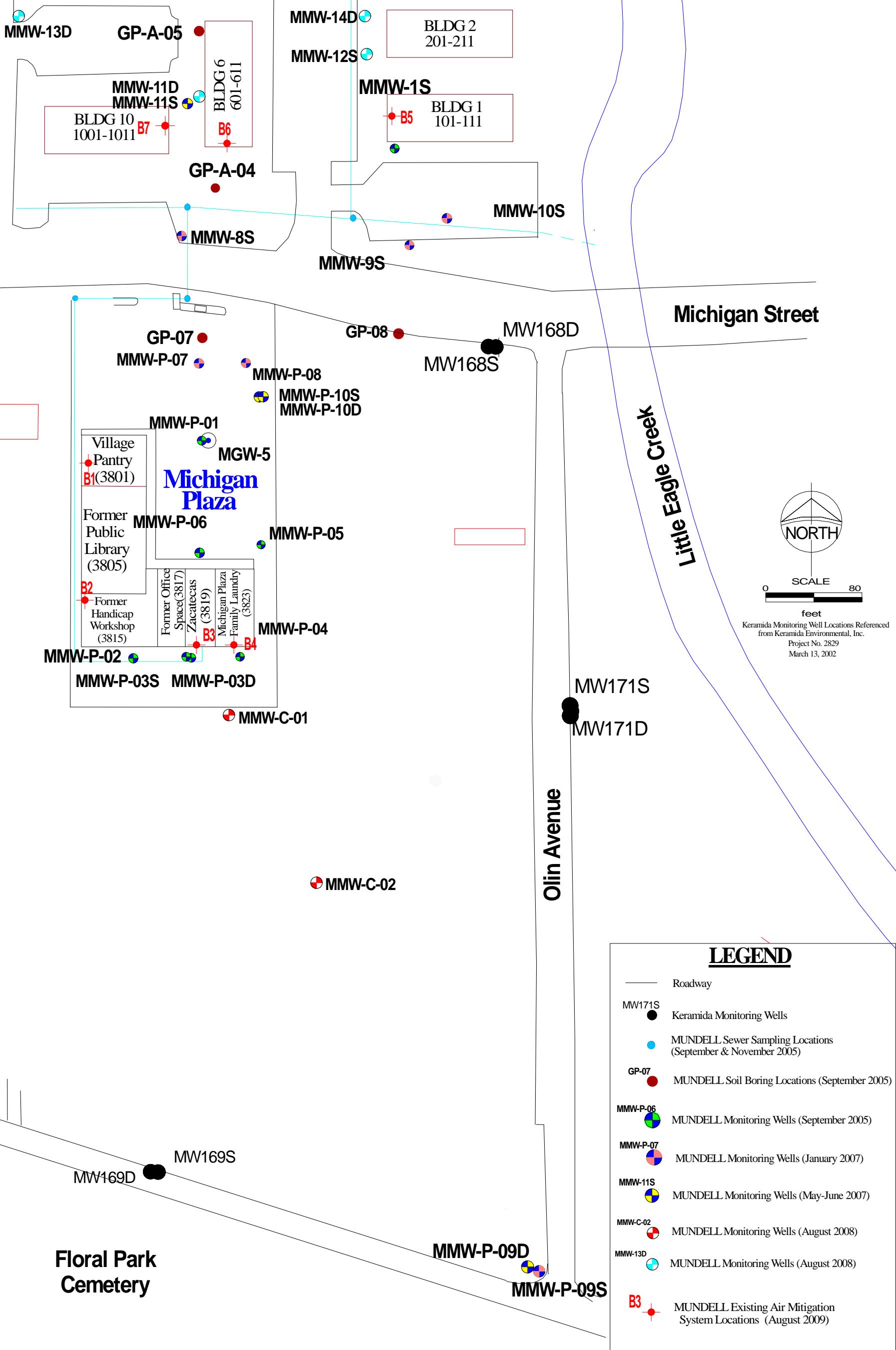
# **Parent and Daughter Products Distribution in Groundwater**

## **Fourth Quarter 2000**

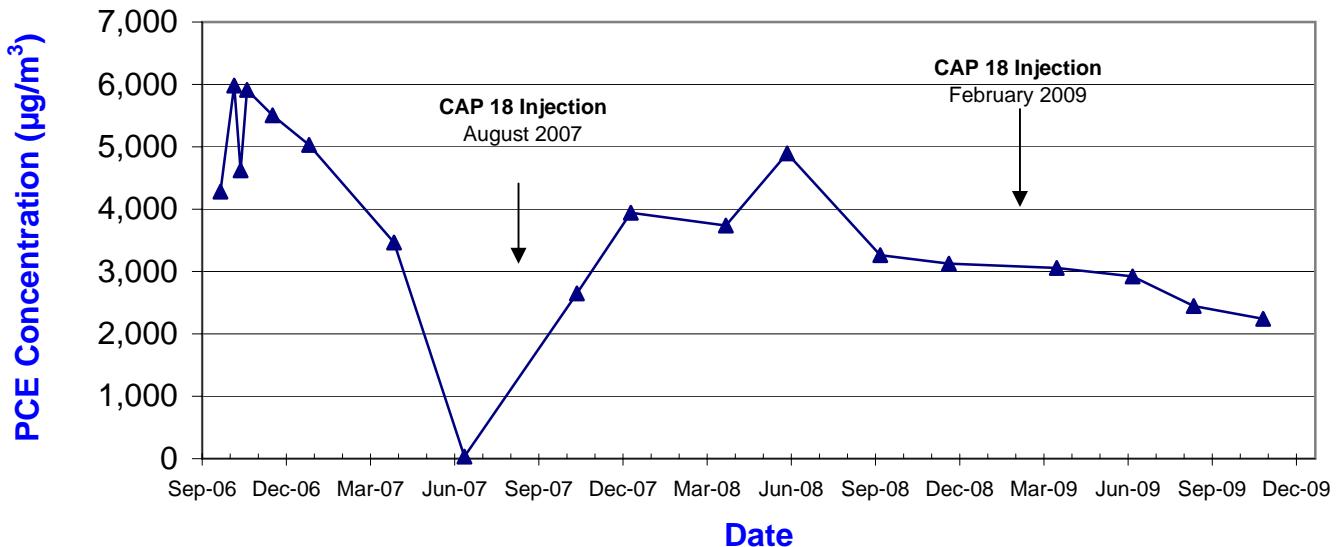
Fourth Quarter 2009  
Michigan Plaza  
3801-3823 West Michigan Street  
Indianapolis, Indiana

# FIGURE

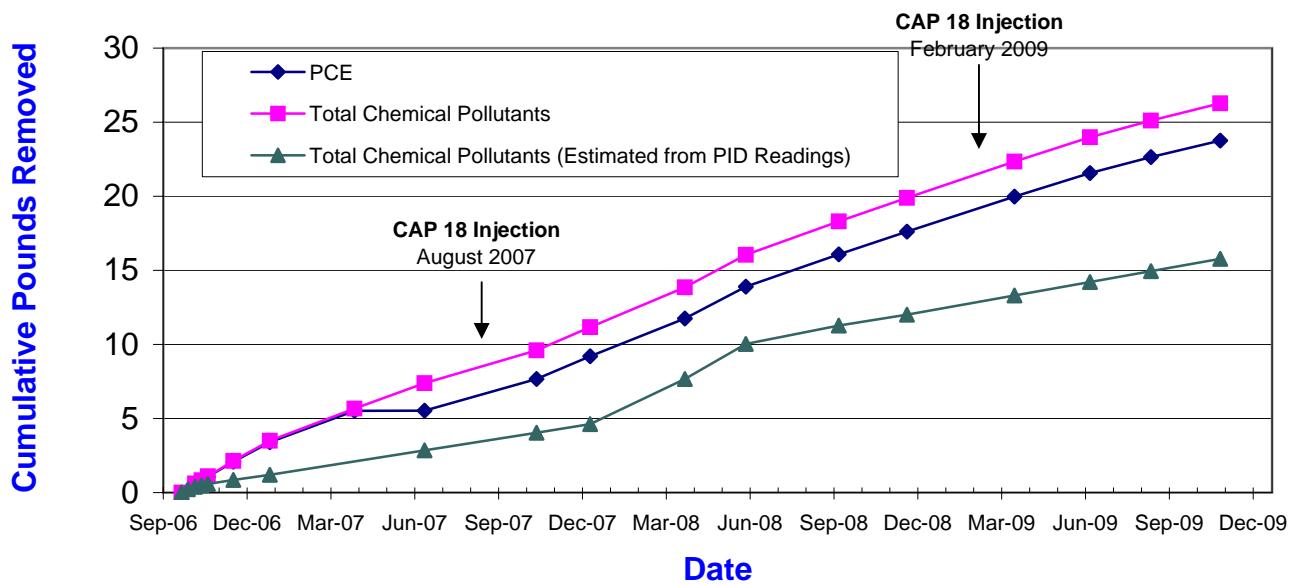
## 4



**PCE Vapor Concentrations Trend -  
Village Pantry Vapor Mitigation System (B1)**



**Chemical Pounds Removed -  
Village Pantry Vapor Mitigation System (B1)**



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Indianapolis, Indiana 46219  
[www.MundellAssociates.com](http://www.MundellAssociates.com)

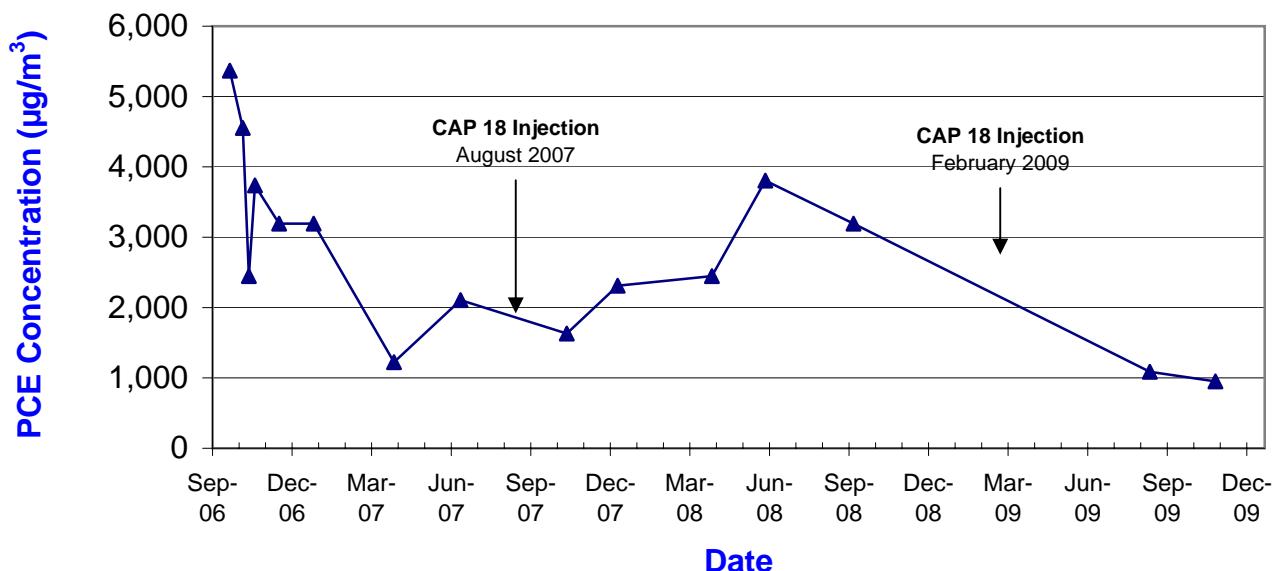
Project Number:
M01046
File:
MI Meadows charts
Date Prepared:
12/17/2009
Scale:
no scale

PCE Concentration Trends  
and Cumulative Pounds Removed  
Vapor Mitigation System B-1 (Village Pantry)  
Fourth Quarter 2009  
Michigan Plaza  
3801-3823 West Michigan Avenue  
Indianapolis, IN

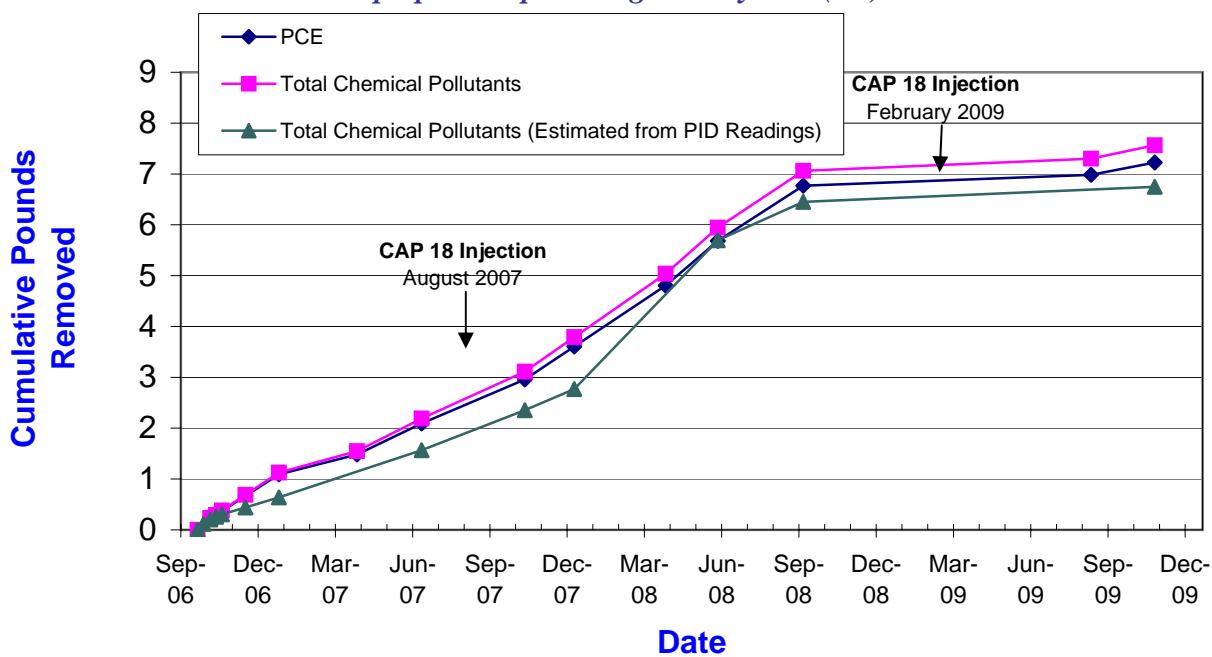
FIGURE

6

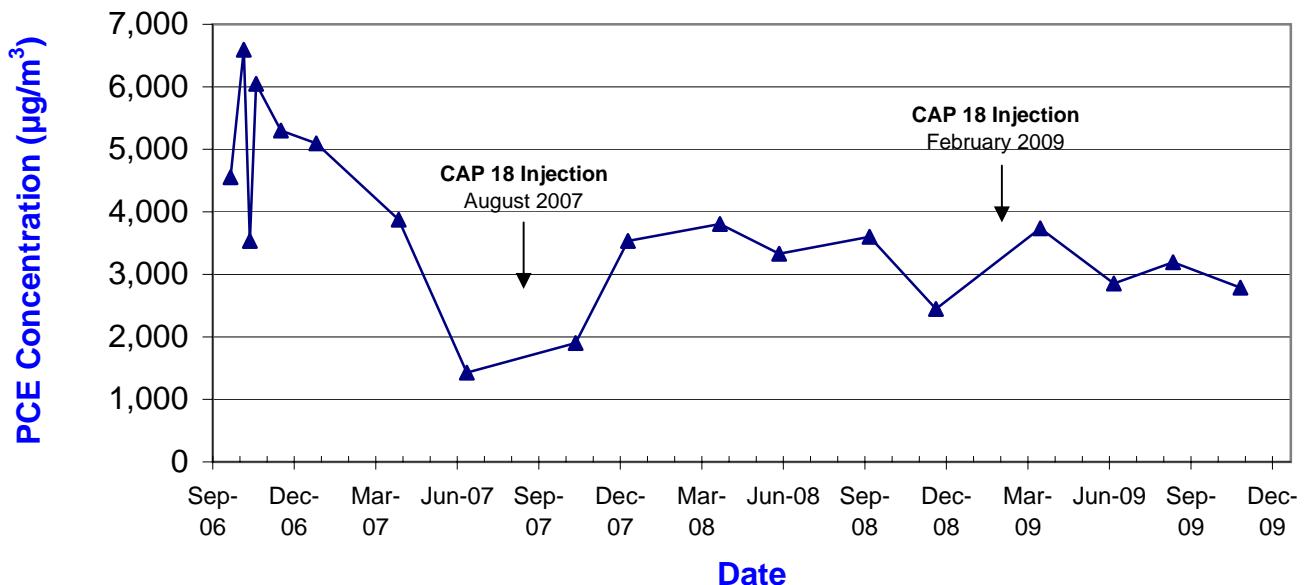
**PCE Vapor Concentrations Trend -  
Handicap Space Vapor Mitigation System (B2)**



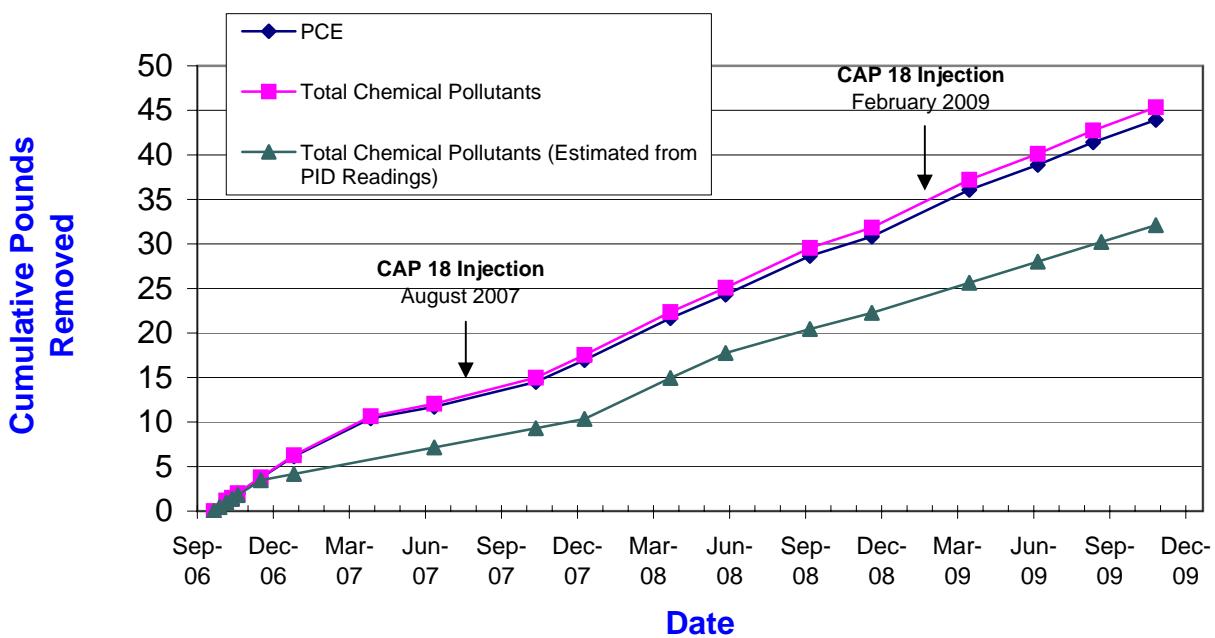
**Chemical Pounds Removed -  
Handicap Space Vapor Mitigation System (B2)**



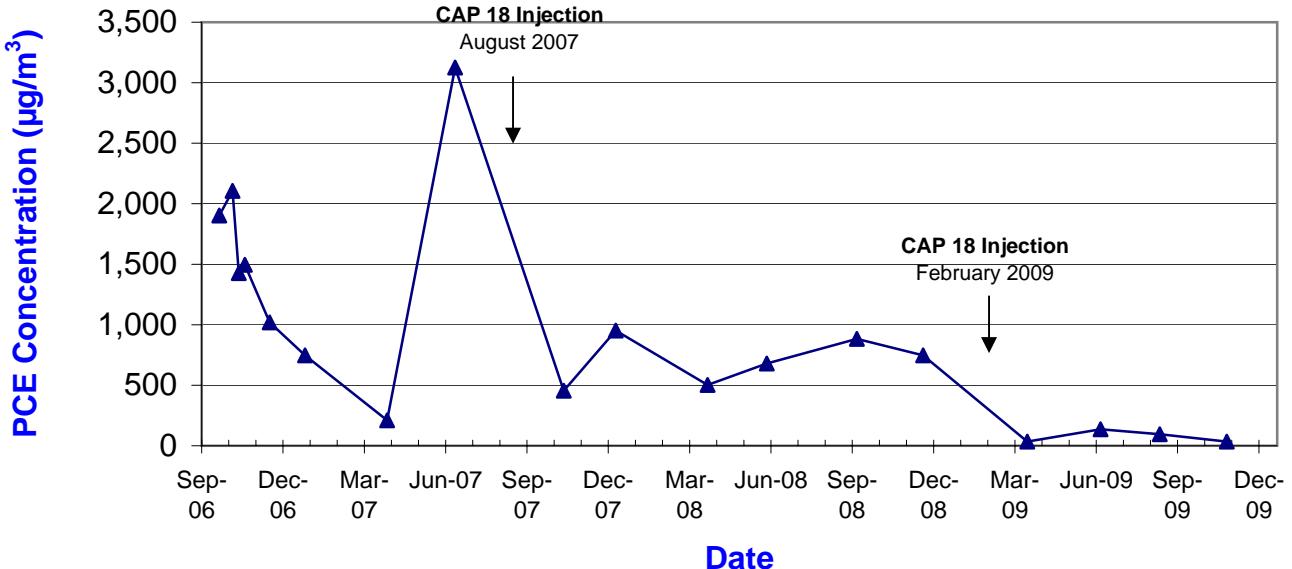
**PCE Vapor Concentrations Trend -  
Mexican Store Vapor Mitigation System (B3)**



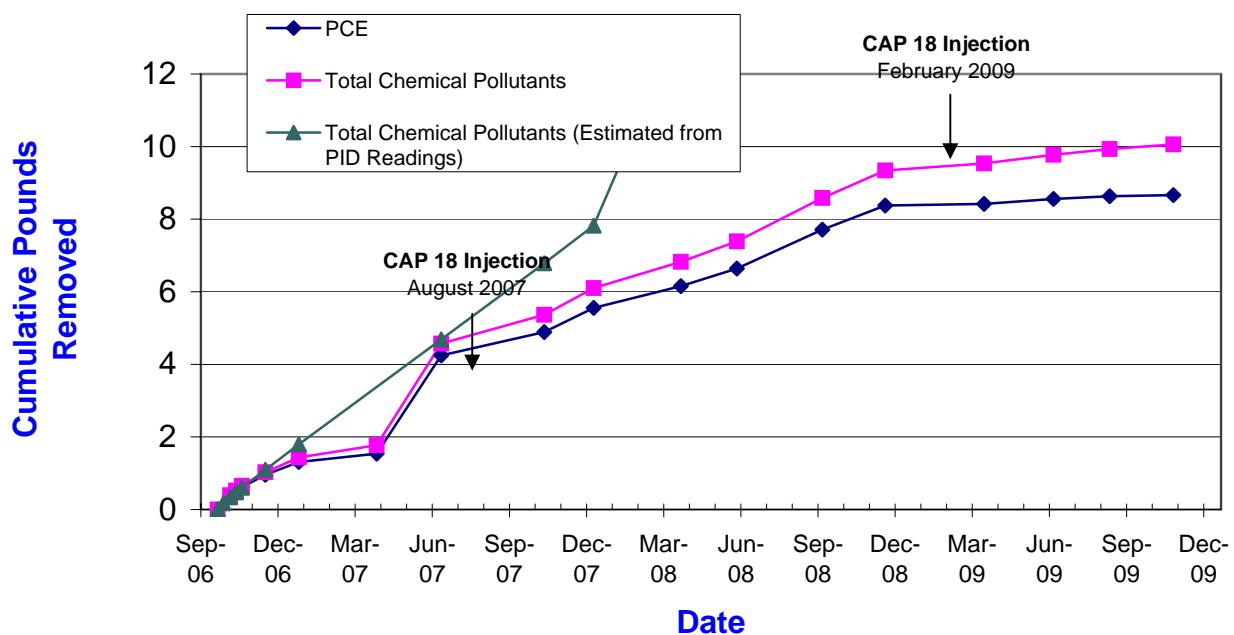
**Chemical Pounds Removed -  
Mexican Store Vapor Mitigation System (B3)**



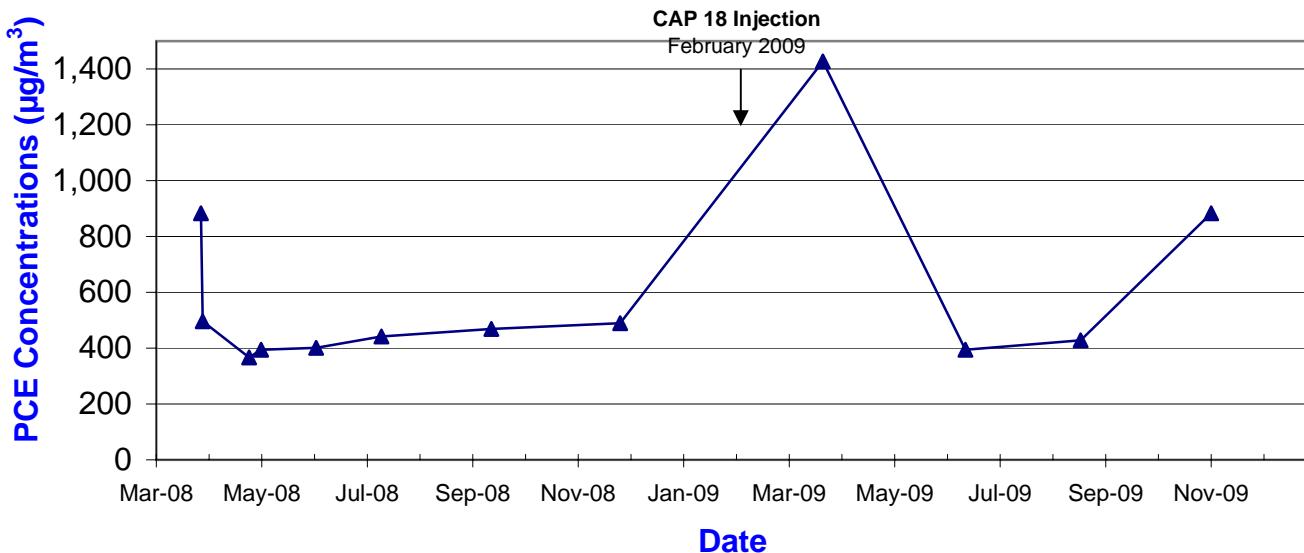
**PCE Vapor Concentrations Trend -  
Laundromat Vapor Mitigation System (B4)**



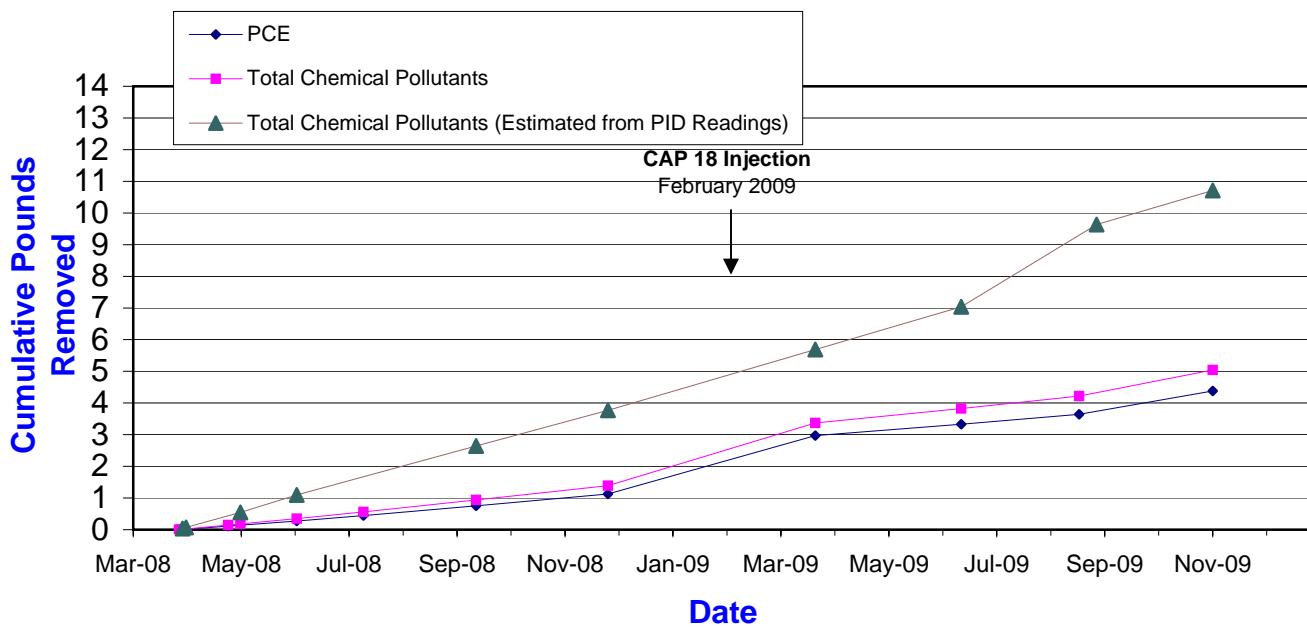
**Chemical Pounds Removed -  
Laundromat Vapor Mitigation System (B4)**



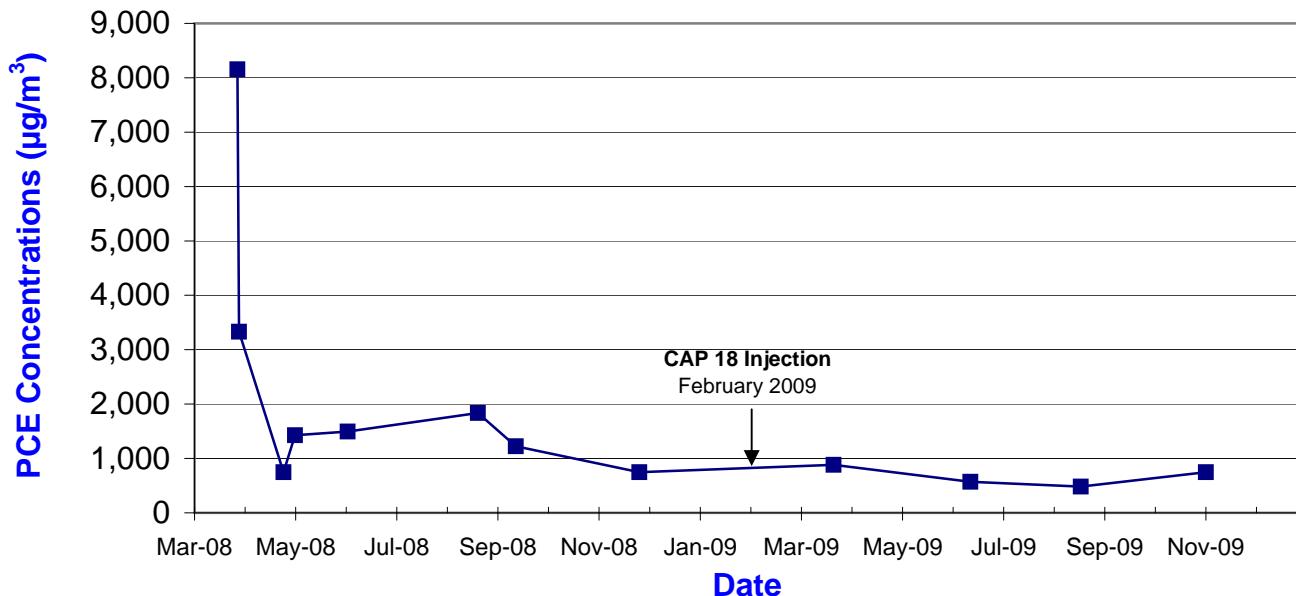
**PCE Vapor Concentrations Trend -  
Apartment Building 1 Vapor Mitigation System (B5)**



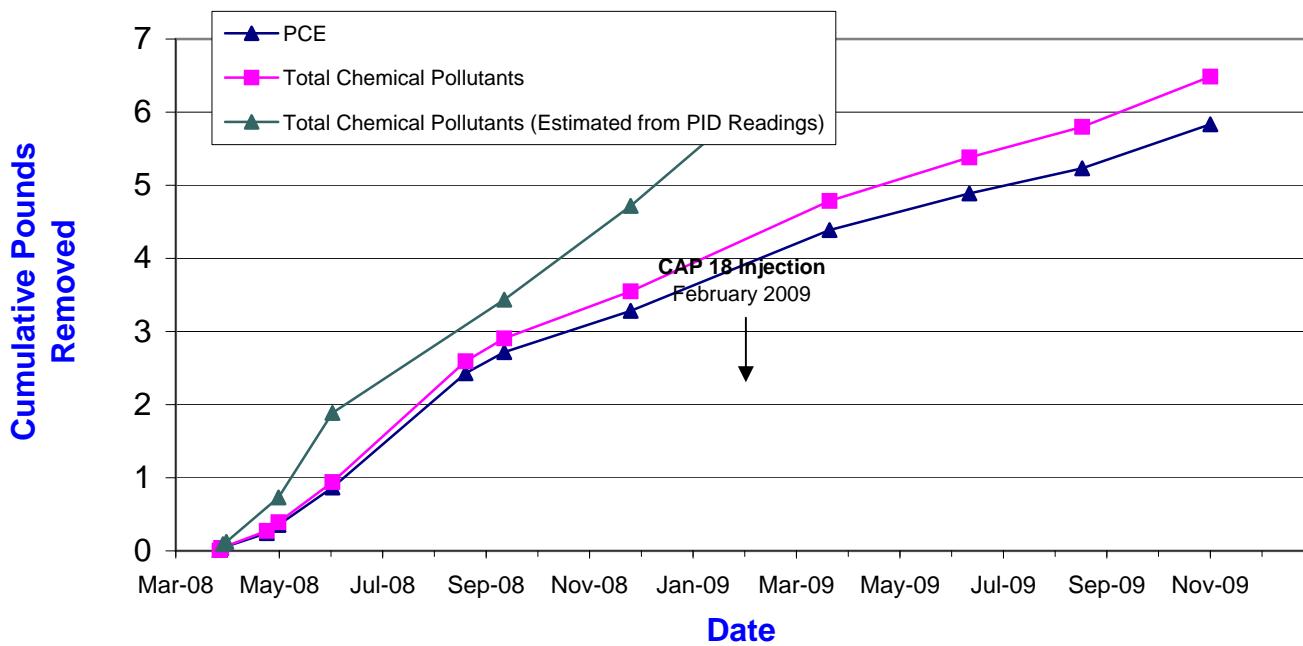
**Chemical Pounds Removed -  
Apartment Building 1 Vapor Mitigation System (B5)**



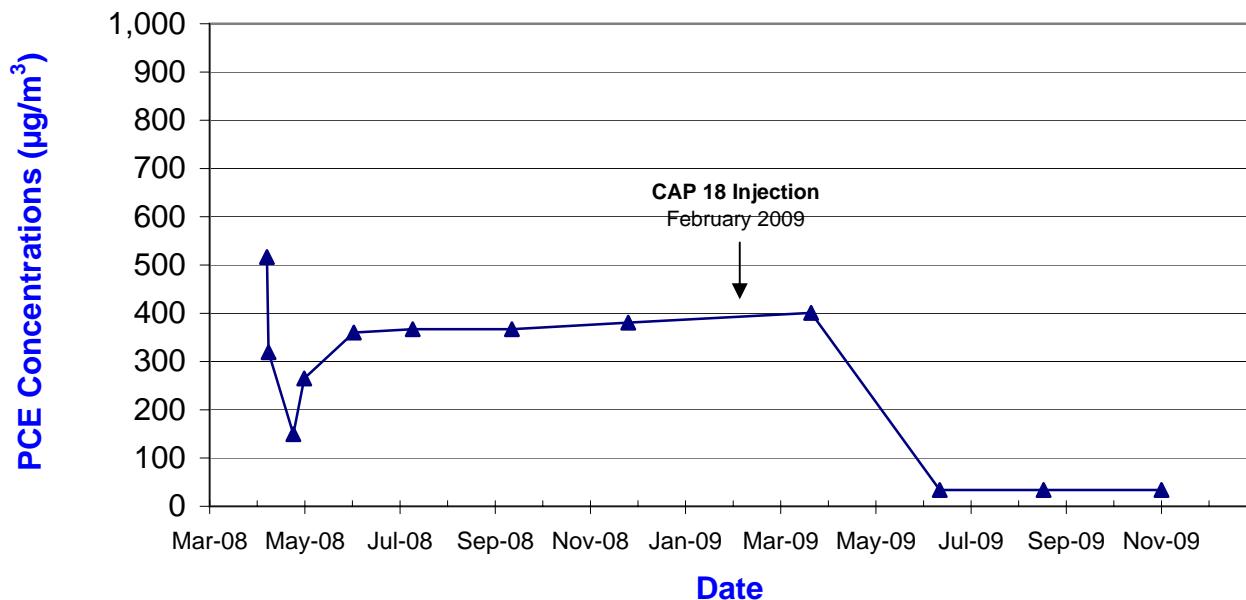
**PCE Vapor Concentrations Trend -  
Apartment Building 6 Vapor Mitigation System (B6)**



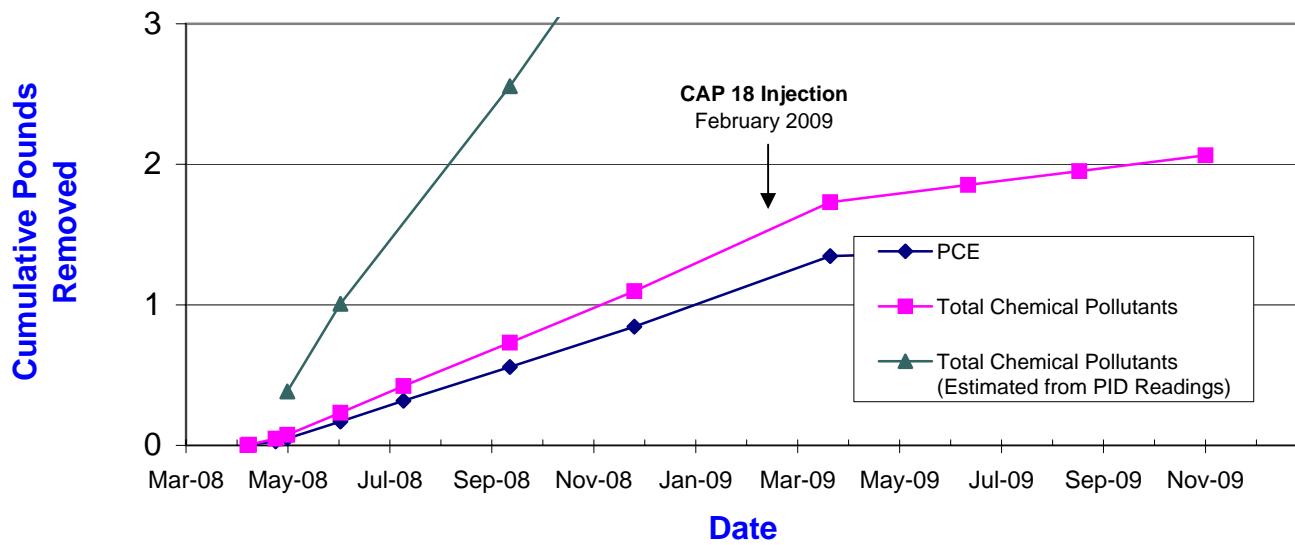
**Chemical Pounds Removed -  
Apartment Building 6 Vapor Mitigation System (B6)**



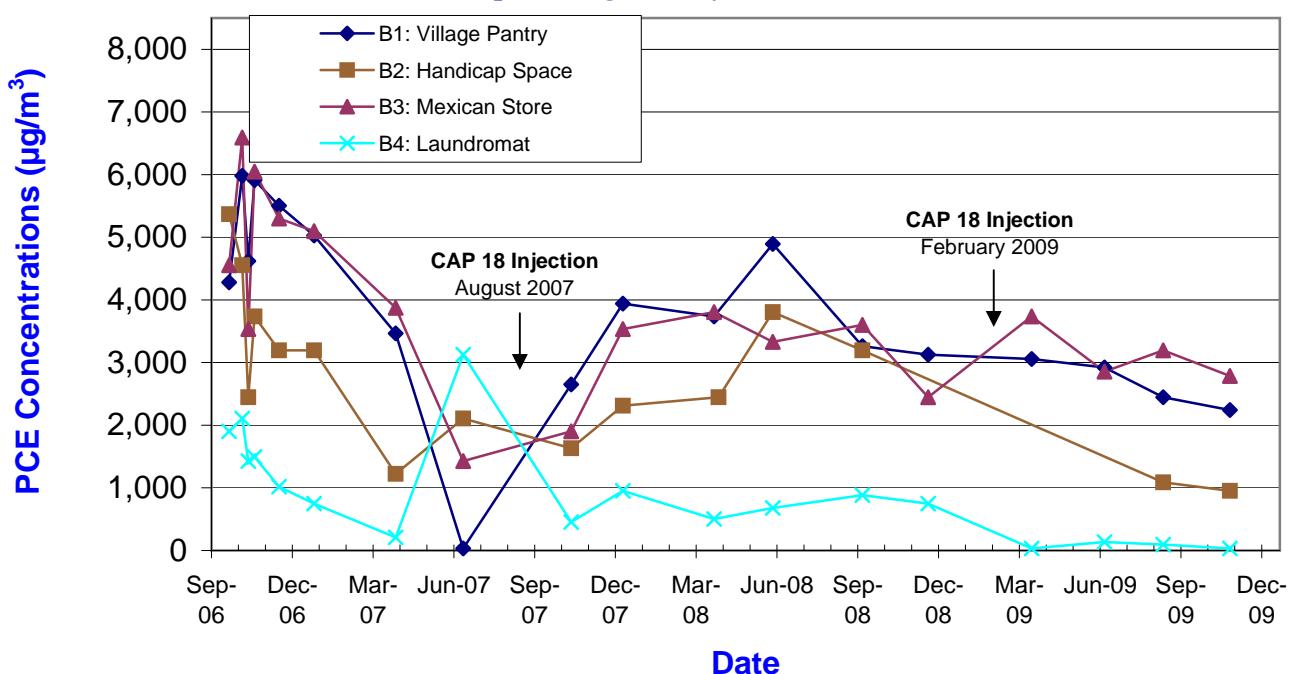
**PCE Vapor Concentrations Trend -  
Apartment Building 10 Vapor Mitigation System (B7)**



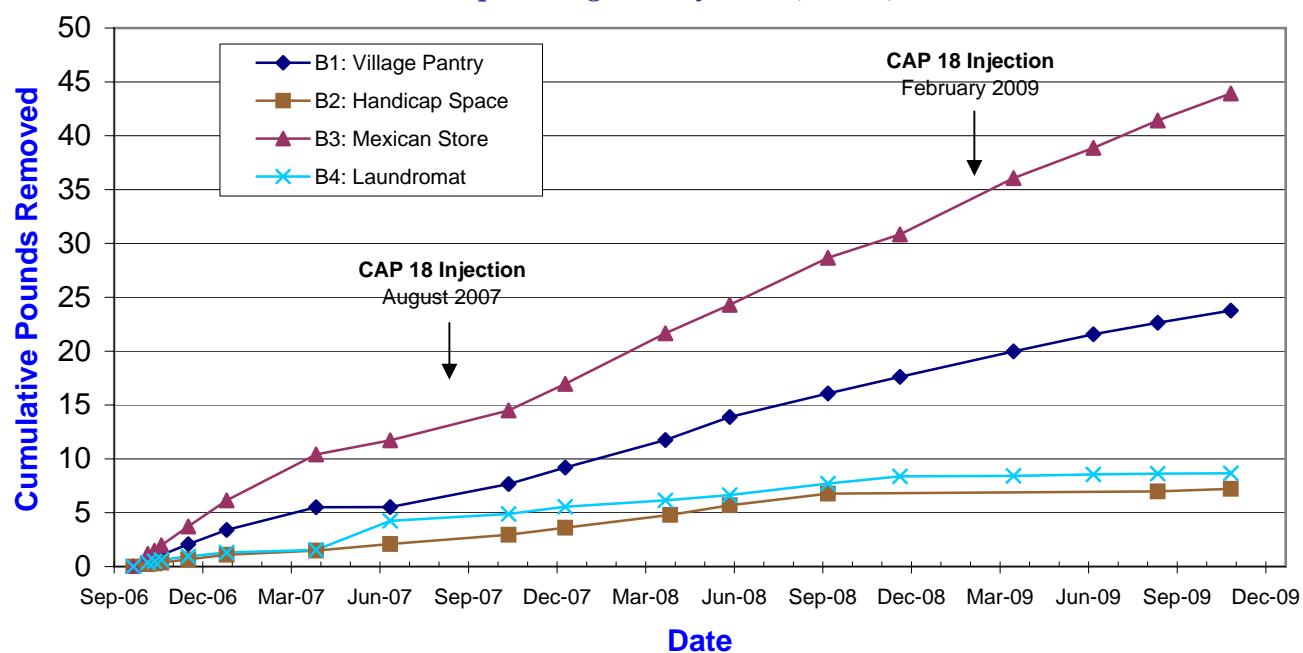
**Chemical Pounds Removed -  
Apartment Building 10 Vapor Mitigation System (B7)**



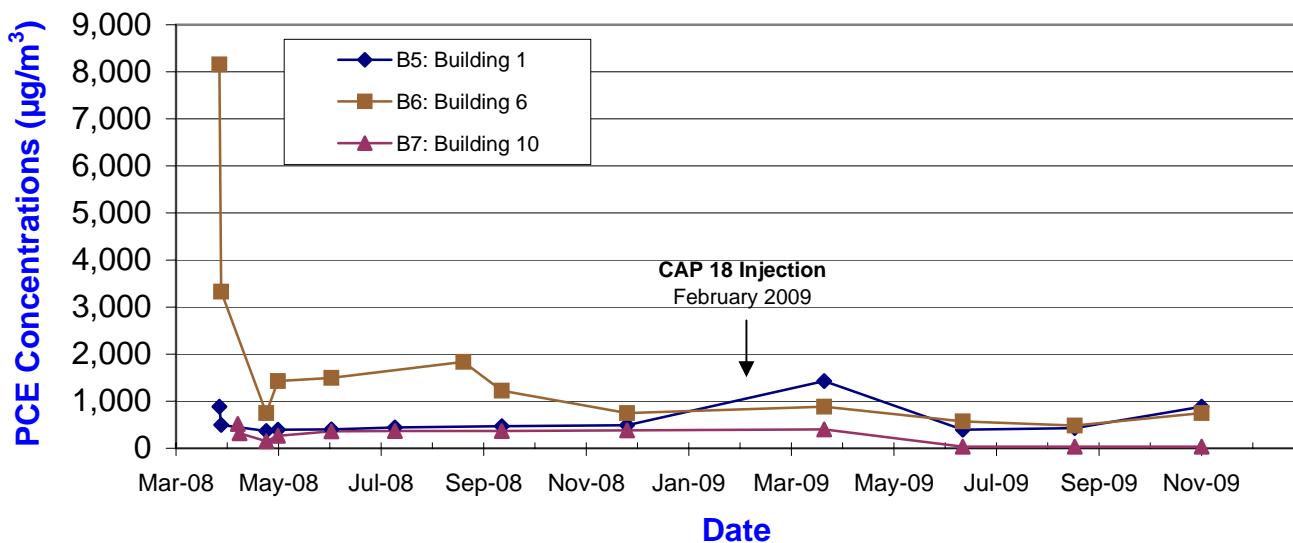
**PCE Concentrations Trend -  
Plaza Vapor Mitigation Systems (B1-B4)**



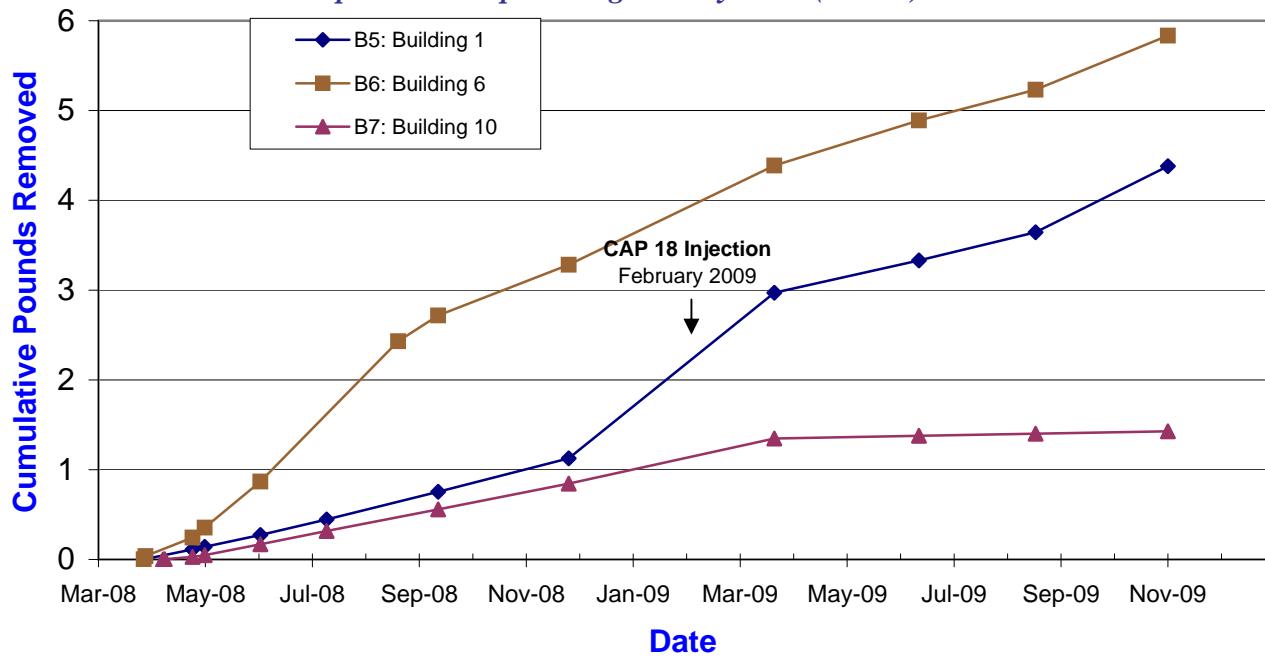
**PCE Pounds Removed -  
Plaza Vapor Mitigation Systems (B1-B4)**



**PCE Concentrations Trend -  
Apartment Vapor Mitigation Systems (B5-B7)**



**PCE Pounds Removed -  
Apartment Vapor Mitigation Systems (B5-B7)**



## **APPENDIX A**

### **Lab Analytical Results**

November 17, 2009

Ms. Leena Lothe  
Mundell & Associates, Inc.  
110 South Downey Avenue  
Indianapolis, IN 46219

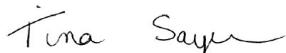
RE: Project: MI Plaza/M01046  
Pace Project No.: 5031794

Dear Ms. Lothe:

Enclosed are the analytical results for sample(s) received by the laboratory on November 03, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Tina Sayer

tina.sayer@pacelabs.com  
Project Manager

Illinois/NELAC Certification #: 100418  
Indiana Certification #: C-49-06  
Kansas Certification #: E-10247  
Kentucky Certification #: 0042  
Ohio VAP: CL0065  
Pennsylvania: 68-00791  
West Virginia Certification #: 330

Enclosures

#### REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: MI Plaza/M01046

Pace Project No.: 5031794

Lab ID	Sample ID	Matrix	Date Collected	Date Received
5031794001	MMW-1S	Water	11/02/09 11:50	11/03/09 10:55
5031794002	MMW-9S	Water	11/02/09 11:05	11/03/09 10:55
5031794003	MMW-10S	Water	11/02/09 11:31	11/03/09 10:55
5031794004	MMW-11S	Water	11/02/09 13:11	11/03/09 10:55
5031794005	MMW-11D	Water	11/02/09 13:55	11/03/09 10:55
5031794006	MMW-12S	Water	11/02/09 12:11	11/03/09 10:55
5031794007	MMW-13D	Water	11/02/09 12:50	11/03/09 10:55
5031794008	MMW-14D	Water	11/02/09 12:30	11/03/09 10:55
5031794009	Trip Blank	Water	11/02/09 08:00	11/03/09 10:55
5031794010	MMW-8S	Water	11/02/09 14:20	11/03/09 10:55

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: MI Plaza/M01046  
Pace Project No.: 5031794

Lab ID	Sample ID	Method	Analysts	Analytes Reported
5031794001	<b>MMW-1S</b>	ASTM D516-90,02	TPD	1
		EPA 353.2	CLS	1
		EPA 8260	SLB	18
5031794002	<b>MMW-9S</b>	ASTM D516-90,02	TPD	1
		EPA 353.2	CLS	1
		EPA 8260	SLB	18
5031794003	<b>MMW-10S</b>	SM 2340B	FRW	1
		EPA 8260	SLB	18
		ASTM D516-90,02	TPD	1
5031794004	<b>MMW-11S</b>	EPA 353.2	CLS	1
		EPA 8260	SLB	18
		EPA 8260	SLB	18
5031794005	<b>MMW-11D</b>	EPA 8260	SLB	18
5031794006	<b>MMW-12S</b>	EPA 8260	SLB	18
5031794007	<b>MMW-13D</b>	EPA 8260	SLB	18
5031794008	<b>MMW-14D</b>	EPA 8260	SLB	18
5031794009	<b>Trip Blank</b>	EPA 8260	SLB	18
5031794010	<b>MMW-8S</b>	EPA 8260	SLB	18

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031794

Sample: MMW-1S	Lab ID: 5031794001	Collected: 11/02/09 11:50	Received: 11/03/09 10:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/05/09 09:32	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/05/09 09:32	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/05/09 09:32	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/05/09 09:32	75-35-4	
cis-1,2-Dichloroethene	119	ug/L	5.0	1		11/05/09 09:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/05/09 09:32	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/05/09 09:32	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/05/09 09:32	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/05/09 09:32	91-20-3	
Tetrachloroethene	189	ug/L	5.0	1		11/05/09 09:32	127-18-4	
Toluene	ND	ug/L	5.0	1		11/05/09 09:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/05/09 09:32	71-55-6	
Trichloroethene	39.0	ug/L	5.0	1		11/05/09 09:32	79-01-6	
Vinyl chloride	26.6	ug/L	2.0	1		11/05/09 09:32	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/05/09 09:32	1330-20-7	
Dibromofluoromethane (S)	99 %		80-123	1		11/05/09 09:32	1868-53-7	
4-Bromofluorobenzene (S)	101 %		70-126	1		11/05/09 09:32	460-00-4	
Toluene-d8 (S)	98 %		80-116	1		11/05/09 09:32	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/04/09 10:10		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	12.4	mg/L	5.0	1		11/05/09 12:12	14808-79-8	

Date: 11/17/2009 01:43 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031794

Sample: MMW-9S	Lab ID: 5031794002	Collected: 11/02/09 11:05	Received: 11/03/09 10:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2340B Hardness, Total (Calc.)</b>	Analytical Method: SM 2340B							
Total Hardness	627	mg/L	1.0	1		11/15/09 12:43		
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/05/09 10:32	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/05/09 10:32	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/05/09 10:32	67-66-3	
1,1-Dichloroethene	5.3	ug/L	5.0	1		11/05/09 10:32	75-35-4	
cis-1,2-Dichloroethene	5410	ug/L	125	25		11/05/09 12:10	156-59-2	
trans-1,2-Dichloroethene	120	ug/L	5.0	1		11/05/09 10:32	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/05/09 10:32	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/05/09 10:32	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/05/09 10:32	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/05/09 10:32	127-18-4	
Toluene	ND	ug/L	5.0	1		11/05/09 10:32	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/05/09 10:32	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/05/09 10:32	79-01-6	
Vinyl chloride	1050	ug/L	50.0	25		11/05/09 12:10	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/05/09 10:32	1330-20-7	
Dibromofluoromethane (S)	107	%	80-123	1		11/05/09 10:32	1868-53-7	
4-Bromofluorobenzene (S)	99	%	70-126	1		11/05/09 10:32	460-00-4	
Toluene-d8 (S)	95	%	80-116	1		11/05/09 10:32	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/04/09 10:07		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	135	mg/L	50.0	1		11/05/09 12:12	14808-79-8	

Date: 11/17/2009 01:43 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031794

Sample: MMW-10S	Lab ID: 5031794003	Collected: 11/02/09 11:31	Received: 11/03/09 10:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/05/09 12:44	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/05/09 12:44	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/05/09 12:44	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/05/09 12:44	75-35-4	
cis-1,2-Dichloroethene	<b>239</b>	ug/L	5.0	1		11/05/09 12:44	156-59-2	
trans-1,2-Dichloroethene	<b>5.6</b>	ug/L	5.0	1		11/05/09 12:44	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/05/09 12:44	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/05/09 12:44	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/05/09 12:44	91-20-3	
Tetrachloroethene	<b>12.8</b>	ug/L	5.0	1		11/05/09 12:44	127-18-4	
Toluene	ND	ug/L	5.0	1		11/05/09 12:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/05/09 12:44	71-55-6	
Trichloroethene	<b>10.1</b>	ug/L	5.0	1		11/05/09 12:44	79-01-6	
Vinyl chloride	<b>119</b>	ug/L	2.0	1		11/05/09 12:44	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/05/09 12:44	1330-20-7	
Dibromofluoromethane (S)	100 %		80-123	1		11/05/09 12:44	1868-53-7	
4-Bromofluorobenzene (S)	99 %		70-126	1		11/05/09 12:44	460-00-4	
Toluene-d8 (S)	96 %		80-116	1		11/05/09 12:44	2037-26-5	

Date: 11/17/2009 01:43 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031794

Sample: MMW-11S	Lab ID: 5031794004	Collected: 11/02/09 13:11	Received: 11/03/09 10:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/05/09 13:18	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/05/09 13:18	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/05/09 13:18	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/05/09 13:18	75-35-4	
cis-1,2-Dichloroethene	<b>59.9</b>	ug/L	5.0	1		11/05/09 13:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/05/09 13:18	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/05/09 13:18	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/05/09 13:18	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/05/09 13:18	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/05/09 13:18	127-18-4	
Toluene	ND	ug/L	5.0	1		11/05/09 13:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/05/09 13:18	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/05/09 13:18	79-01-6	
Vinyl chloride	ND	ug/L	2.0	1		11/05/09 13:18	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/05/09 13:18	1330-20-7	
Dibromofluoromethane (S)	100 %		80-123	1		11/05/09 13:18	1868-53-7	
4-Bromofluorobenzene (S)	102 %		70-126	1		11/05/09 13:18	460-00-4	
Toluene-d8 (S)	100 %		80-116	1		11/05/09 13:18	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	<b>1.2</b>	mg/L	0.10	1		11/04/09 10:11		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	<b>159</b>	mg/L	25.0	1		11/05/09 12:12	14808-79-8	

Date: 11/17/2009 01:43 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031794

Sample: MMW-11D	Lab ID: 5031794005	Collected: 11/02/09 13:55	Received: 11/03/09 10:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/05/09 13:52	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/05/09 13:52	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/05/09 13:52	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/05/09 13:52	75-35-4	
cis-1,2-Dichloroethene	<b>771</b>	ug/L	50.0	10		11/06/09 11:34	156-59-2	
trans-1,2-Dichloroethene	<b>31.8</b>	ug/L	5.0	1		11/05/09 13:52	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/05/09 13:52	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/05/09 13:52	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/05/09 13:52	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/05/09 13:52	127-18-4	
Toluene	ND	ug/L	5.0	1		11/05/09 13:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/05/09 13:52	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/05/09 13:52	79-01-6	
Vinyl chloride	<b>18.8</b>	ug/L	2.0	1		11/05/09 13:52	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/05/09 13:52	1330-20-7	
Dibromofluoromethane (S)	100 %		80-123	1		11/05/09 13:52	1868-53-7	
4-Bromofluorobenzene (S)	104 %		70-126	1		11/05/09 13:52	460-00-4	
Toluene-d8 (S)	99 %		80-116	1		11/05/09 13:52	2037-26-5	

Date: 11/17/2009 01:43 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031794

Sample: MMW-12S	Lab ID: 5031794006	Collected: 11/02/09 12:11	Received: 11/03/09 10:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/05/09 14:25	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/05/09 14:25	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/05/09 14:25	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/05/09 14:25	75-35-4	
cis-1,2-Dichloroethene	<b>28.8</b>	ug/L	5.0	1		11/05/09 14:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/05/09 14:25	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/05/09 14:25	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/05/09 14:25	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/05/09 14:25	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/05/09 14:25	127-18-4	
Toluene	ND	ug/L	5.0	1		11/05/09 14:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/05/09 14:25	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/05/09 14:25	79-01-6	
Vinyl chloride	<b>7.1</b>	ug/L	2.0	1		11/05/09 14:25	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/05/09 14:25	1330-20-7	
Dibromofluoromethane (S)	101 %		80-123	1		11/05/09 14:25	1868-53-7	
4-Bromofluorobenzene (S)	106 %		70-126	1		11/05/09 14:25	460-00-4	
Toluene-d8 (S)	96 %		80-116	1		11/05/09 14:25	2037-26-5	

Date: 11/17/2009 01:43 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031794

Sample: MMW-13D	Lab ID: 5031794007	Collected: 11/02/09 12:50	Received: 11/03/09 10:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/05/09 14:59	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/05/09 14:59	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/05/09 14:59	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/05/09 14:59	75-35-4	
cis-1,2-Dichloroethene	<b>949</b>	ug/L	125	25		11/06/09 12:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/05/09 14:59	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/05/09 14:59	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/05/09 14:59	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/05/09 14:59	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/05/09 14:59	127-18-4	
Toluene	ND	ug/L	5.0	1		11/05/09 14:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/05/09 14:59	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/05/09 14:59	79-01-6	
Vinyl chloride	<b>182</b>	ug/L	2.0	1		11/05/09 14:59	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/05/09 14:59	1330-20-7	
Dibromofluoromethane (S)	101 %		80-123	1		11/05/09 14:59	1868-53-7	
4-Bromofluorobenzene (S)	99 %		70-126	1		11/05/09 14:59	460-00-4	
Toluene-d8 (S)	97 %		80-116	1		11/05/09 14:59	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031794

Sample: MMW-14D	Lab ID: 5031794008	Collected: 11/02/09 12:30	Received: 11/03/09 10:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/05/09 15:33	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/05/09 15:33	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/05/09 15:33	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/05/09 15:33	75-35-4	
cis-1,2-Dichloroethene	541	ug/L	50.0	10		11/06/09 12:34	156-59-2	
trans-1,2-Dichloroethene	9.2	ug/L	5.0	1		11/05/09 15:33	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/05/09 15:33	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/05/09 15:33	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/05/09 15:33	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/05/09 15:33	127-18-4	
Toluene	ND	ug/L	5.0	1		11/05/09 15:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/05/09 15:33	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/05/09 15:33	79-01-6	
Vinyl chloride	83.8	ug/L	2.0	1		11/05/09 15:33	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/05/09 15:33	1330-20-7	
Dibromofluoromethane (S)	101 %		80-123	1		11/05/09 15:33	1868-53-7	
4-Bromofluorobenzene (S)	100 %		70-126	1		11/05/09 15:33	460-00-4	
Toluene-d8 (S)	97 %		80-116	1		11/05/09 15:33	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031794

Sample: Trip Blank	Lab ID: 5031794009	Collected: 11/02/09 08:00	Received: 11/03/09 10:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/05/09 16:07	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/05/09 16:07	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/05/09 16:07	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/05/09 16:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		11/05/09 16:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/05/09 16:07	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/05/09 16:07	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/05/09 16:07	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/05/09 16:07	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/05/09 16:07	127-18-4	
Toluene	ND	ug/L	5.0	1		11/05/09 16:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/05/09 16:07	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/05/09 16:07	79-01-6	
Vinyl chloride	ND	ug/L	2.0	1		11/05/09 16:07	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/05/09 16:07	1330-20-7	
Dibromofluoromethane (S)	100 %		80-123	1		11/05/09 16:07	1868-53-7	
4-Bromofluorobenzene (S)	102 %		70-126	1		11/05/09 16:07	460-00-4	
Toluene-d8 (S)	97 %		80-116	1		11/05/09 16:07	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031794

Sample: MMW-8S	Lab ID: 5031794010	Collected: 11/02/09 14:20	Received: 11/03/09 10:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/05/09 16:40	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/05/09 16:40	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/05/09 16:40	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/05/09 16:40	75-35-4	
cis-1,2-Dichloroethene	<b>58.3</b>	ug/L	5.0	1		11/05/09 16:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/05/09 16:40	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/05/09 16:40	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/05/09 16:40	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/05/09 16:40	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/05/09 16:40	127-18-4	
Toluene	ND	ug/L	5.0	1		11/05/09 16:40	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/05/09 16:40	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/05/09 16:40	79-01-6	
Vinyl chloride	<b>277</b>	ug/L	20.0	10		11/05/09 17:14	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/05/09 16:40	1330-20-7	
Dibromofluoromethane (S)	100 %		80-123	1		11/05/09 16:40	1868-53-7	
4-Bromofluorobenzene (S)	102 %		70-126	1		11/05/09 16:40	460-00-4	
Toluene-d8 (S)	97 %		80-116	1		11/05/09 16:40	2037-26-5	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: MI Plaza/M01046

Pace Project No.: 5031794

QC Batch: WETA/4340 Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.

Associated Lab Samples: 5031794001, 5031794002, 5031794004

METHOD BLANK: 363221 Matrix: Water

Associated Lab Samples: 5031794001, 5031794002, 5031794004

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Nitrogen, Nitrate	mg/L	ND	0.10	11/04/09 10:05	

LABORATORY CONTROL SAMPLE: 363222

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Nitrogen, Nitrate	mg/L	1	0.92	92	90-110	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 363223 363224

Parameter	Units	5031794002	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Max	RPD	RPD	Qual
		Result	Spike	Spike										
Nitrogen, Nitrate	mg/L	ND	1	1	0.90	0.89	87	86	90-110	.7	20	M3		

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## QUALITY CONTROL DATA

Project: MI Plaza/M01046

Pace Project No.: 5031794

QC Batch: WETA/4344 Analysis Method: ASTM D516-90,02

QC Batch Method: ASTM D516-90,02 Analysis Description: ASTM D516-9002 Sulfate Water

Associated Lab Samples: 5031794001, 5031794002, 5031794004

METHOD BLANK: 363783 Matrix: Water

Associated Lab Samples: 5031794001, 5031794002, 5031794004

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Sulfate	mg/L	ND	5.0	11/05/09 12:12	

LABORATORY CONTROL SAMPLE: 363784

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Sulfate	mg/L	20	19.2	96	90-110	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 363785 363786

Parameter	Units	5031794002	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Max	RPD	RPD	Qual
		Result	Spike	Spike										
Sulfate	mg/L	135	200	200	349	351	107	108	75-125	.6	20			

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## QUALITY CONTROL DATA

Project: MI Plaza/M01046

Pace Project No.: 5031794

QC Batch:	MSV/19740	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	5031794001, 5031794002, 5031794003, 5031794004, 5031794005, 5031794006, 5031794007, 5031794008, 5031794009, 5031794010		

METHOD BLANK: 364227                          Matrix: Water

Associated Lab Samples: 5031794001, 5031794002, 5031794003, 5031794004, 5031794005, 5031794006, 5031794007, 5031794008, 5031794009, 5031794010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	11/05/09 09:02	
1,1-Dichloroethene	ug/L	ND	5.0	11/05/09 09:02	
Benzene	ug/L	ND	5.0	11/05/09 09:02	
Carbon tetrachloride	ug/L	ND	5.0	11/05/09 09:02	
Chloroform	ug/L	ND	5.0	11/05/09 09:02	
cis-1,2-Dichloroethene	ug/L	ND	5.0	11/05/09 09:02	
Ethylbenzene	ug/L	ND	5.0	11/05/09 09:02	
Methylene chloride	ug/L	ND	5.0	11/05/09 09:02	
Naphthalene	ug/L	ND	5.0	11/05/09 09:02	
Tetrachloroethene	ug/L	ND	5.0	11/05/09 09:02	
Toluene	ug/L	ND	5.0	11/05/09 09:02	
trans-1,2-Dichloroethene	ug/L	ND	5.0	11/05/09 09:02	
Trichloroethene	ug/L	ND	5.0	11/05/09 09:02	
Vinyl chloride	ug/L	ND	2.0	11/05/09 09:02	
Xylene (Total)	ug/L	ND	10.0	11/05/09 09:02	
4-Bromofluorobenzene (S)	%	102	70-126	11/05/09 09:02	
Dibromofluoromethane (S)	%	98	80-123	11/05/09 09:02	
Toluene-d8 (S)	%	97	80-116	11/05/09 09:02	

LABORATORY CONTROL SAMPLE: 364228

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	55.9	112	69-136	
1,1-Dichloroethene	ug/L	50	52.1	104	63-128	
Benzene	ug/L	50	49.3	99	78-127	
Carbon tetrachloride	ug/L	50	59.9	120	62-143	
Chloroform	ug/L	50	51.7	103	74-131	
cis-1,2-Dichloroethene	ug/L	50	52.7	105	74-128	
Ethylbenzene	ug/L	50	51.8	104	81-126	
Methylene chloride	ug/L	50	51.1	102	32-164	
Naphthalene	ug/L	50	58.6	117	61-135	
Tetrachloroethene	ug/L	50	49.9	100	60-119	
Toluene	ug/L	50	53.0	106	75-129	
trans-1,2-Dichloroethene	ug/L	50	55.7	111	71-126	
Trichloroethene	ug/L	50	51.9	104	74-130	
Vinyl chloride	ug/L	50	46.2	92	55-141	
Xylene (Total)	ug/L	150	157	105	76-132	
4-Bromofluorobenzene (S)	%			101	70-126	
Dibromofluoromethane (S)	%			103	80-123	
Toluene-d8 (S)	%			99	80-116	

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## QUALITY CONTROL DATA

Project: MI Plaza/M01046

Pace Project No.: 5031794

Parameter	Units	5031794002		MS Spike		MSD Spike		MS Result		MSD Result		MS % Rec		MSD % Rec		% Rec		Max	
		Result	Conc.	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Limits	RPD	RPD	Qual	
1,1,1-Trichloroethane	ug/L	ND	50	50	48.7	52.1	97	104	64-143	7	20								
1,1-Dichloroethene	ug/L	5.3	50	50	53.6	55.5	97	100	55-140	3	20								
Benzene	ug/L	ND	50	50	42.4	45.7	85	91	63-141	8	20								
Carbon tetrachloride	ug/L	ND	50	50	52.5	57.0	105	114	54-145	8	20								
Chloroform	ug/L	ND	50	50	43.1	46.5	86	93	67-134	8	20								
cis-1,2-Dichloroethene	ug/L	5410	50	50	4200	4190	-2410	-2440	65-132	.4	20	M0							
Ethylbenzene	ug/L	ND	50	50	43.2	44.5	86	89	44-151	3	20								
Methylene chloride	ug/L	ND	50	50	43.1	46.0	86	92	46-154	7	20								
Naphthalene	ug/L	ND	50	50	42.8	50.6	86	101	44-138	17	20								
Tetrachloroethene	ug/L	ND	50	50	43.9	46.0	85	89	25-146	5	20								
Toluene	ug/L	ND	50	50	44.2	45.8	88	92	59-142	3	20								
trans-1,2-Dichloroethene	ug/L	120	50	50	163	162	86	83	60-137	.7	20								
Trichloroethene	ug/L	ND	50	50	43.9	47.9	84	93	61-137	9	20								
Vinyl chloride	ug/L	1050	50	50	1390	1410	670	719	51-144	2	20	M0							
Xylene (Total)	ug/L	ND	150	150	128	137	85	91	44-152	7	20								
4-Bromofluorobenzene (S)	%						100	99	70-126		20								
Dibromofluoromethane (S)	%						101	101	80-123		20								
Toluene-d8 (S)	%						98	97	80-116		20								

## QUALIFIERS

Project: MI Plaza/M01046  
Pace Project No.: 5031794

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M3 Matrix spike recovery was outside laboratory control limits due to matrix interferences.

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

## Section A Required Client Information:

Company: <b>Anderson Associates Inc.</b>	Report To: <b>Lake Louise</b>
Address: <b>110 S. Cherry Ave.</b>	Copy To: <b>Mark Mandell</b>
Email To: <b>Tel: Indianapolis, IN 46219</b>	Attention: <b>Mark Louise</b>
Phone: <b>513-630-9065</b>	Purchase Order No.: <b>MI Plaza</b>
Requested Due Date/TAT: <b>2 Weeks</b>	Project Name: <b>Project Number: M0096</b>

## Section B Required Project Information:

Page:	1	of	1
<b>1320220</b>			

## Section C Invoice Information:

REGULATORY AGENCY		
<input type="checkbox"/> NPDES	<input checked="" type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER
<input type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER
Site Location	STATE:	<b>IN</b>

Residual Chlorine (Y/N)

**5031794**

Pace Project ID

Project No./Lab ID.

RECEIVED ON	10/3/09	10:55 AM
Temp in °C	25	
Reeceived on	10/3/09	10:55 AM
Cooler (Y/N)	Yes	
Cooler by	Mark Louise	
Samples intact (Y/N)	Yes	

Request Analysis Filtered (Y/N)	<b>Y/N</b>
---------------------------------	------------

ITEM #	SAMPLE ID (A-Z, 0-9, -, )	Sample IDs MUST BE UNIQUE	COLLECTED		TIME AT COLLECTION	# OF CONTAINERS	Preservatives	Analyses Test	Y/N	Hardness 130.2	Chloride 325.4	Nitrate 353.2	VOC's 6260 K	VOC's 6260 K
			MATRIX CODE	MATRIX CODE (G=GRAB C=COMP)										
1	MMW-1S		WT	WT	11:50A	1		X	X	-001				
2	MMW-9S (MS/MSD)		DW	DW	11:05A	15	3	X	X	-002				
3	MMW-10S		WW	WW						-003				
4	MMW-11S		P	P	11:31A	3				-004				
5	MMW-11D		SL	SL	1:11P	4	1			-005				
6	MMW-12S		OL	OL	1:55P	3	3			-006				
7	MMW-13D		WP	WP	12:11P	3	3			-007				
8	MMW-14D		AR	AR	12:59P	3	3			-008				
9	Trip Blank		TS	TS	12:30P	3	3			-009				
10	MMW-8S		OT	OT	12:09P	2:29	3							
11														
12														

ADDITIONAL COMMENTS: REINQUISITION BY / AFFILIATION DATE TIME ACCEPTED BY / AFFILIATION DATE TIME SAMPLE CONDITIONS

**\*Please use short list for VOC's.**  
**Nitrate sulfates**  
**short hold time.**

ORIGINAL 44 OR 27	SAMPLER NAME AND SIGNATURE
Pace	PRINT Name of SAMPLER: <b>Mark Louise</b>
SIGNATURE of SAMPLER: <b>Mark Louise</b>	DATE Signed (MM/DD/YY): <b>11/2/09</b>

Time : 12:06  
11/3/09

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

# Sample Condition Upon Receipt



Client Name: Mundell & Assoc. Project # 5031794

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: \_\_\_\_\_

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 123456

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 2.9

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 11/3/09 LS

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

Chain of Custody Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>Water</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Pace Trip Blank Lot # (if purchased):		

## Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Project Manager Review:

J. Sawyer

Date: 11/3/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

CLIENT: Mundell & Assoc.

COC PAGE 1 of 1  
COC ID# 1320220

Project # 5031794

Sample Line	DG9H	AG1U	WGFU	R 4 / 6	BP2N	BP2U	BP2S	BP3N	BP3U	BP3S	AG3S	AG1H	Comments
1	3							1					
2	9							3	3				
3	3												
4	3												
5	3												
6	3												
7	3												
8	3												
9	3												
10	3												
11													
12													

• Container Codes

DG9H	40mL HCl amber vial	AF	Air Filter	BP1N	1 liter HNO3 plastic	DG9P	40mL TSP amber vial
AG1U	1 liter unpreserved amber glass	AG1H	1 liter HCl amber glass	BP1S	1 liter H2SO4 plastic	DG9S	40mL H2SO4 amber vial
WGFU	4oz clear soil jar	AG1S	1 liter H2SO4 amber glass	BP1U	1 liter unpreserved plastic	DG9T	40mL Na Thio amber vial
R	terra core kit	AG1T	1 liter Na Thiosulfate amber gl	BP1Z	1 liter NaOH, Zn, Ac	DG9U	40mL unpreserved amber vial
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2A	500mL NaOH, Asc Acid plastic	I	Wipe/Swab
BP2U	500mL H2SO4 amber glass	AG2S	500mL H2SO4 amber glass	BP2O	500mL NaOH plastic	JGFU	4oz unpreserved amber wide
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber gla	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber gla	BP3A	250mL NaOH, Asc Acid plastic	VGGH	40mL HCl clear vial
BP3U	250mL unpreserved plastic	BG1H	1 liter HCl clear glass	BP3C	250mL NaOH plastic	VG9T	40mL Na Thio. clear vial
BP3S	250mL H2SO4 plastic	BG1S	1 liter H2SO4 clear glass	BP3Z	250mL NaOH, Zn Ac plastic	VG9U	40mL unpreserved clear vial
AG3S	250mL H2SO4 glass amber	BG1T	1 liter Na Thiosulfate clear gla	C	Air Cassettes	VSG	Headspace septa vial & HCl
AG1S	1 liter H2SO4 amber glass	BG1U	1 liter unpreserved glass	DG9B	40mL Na Bisulfite amber vial	WGFX	4oz wide jar w/hexane wipe
BP1U	1 liter unpreserved plastic	BP1A	1 liter NaOH, Asc Acid plastic	DG9M	40mL MeOH clear vial	ZPLC	Ziploc Bag

November 17, 2009

Ms. Leena Lothe  
Mundell & Associates, Inc.  
110 South Downey Avenue  
Indianapolis, IN 46219

RE: Project: MI Plaza/M01046  
Pace Project No.: 5031839

Dear Ms. Lothe:

Enclosed are the analytical results for sample(s) received by the laboratory on November 04, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Tina Sayer

tina.sayer@pacelabs.com  
Project Manager

Illinois/NELAC Certification #: 100418  
Indiana Certification #: C-49-06  
Kansas Certification #: E-10247  
Kentucky Certification #: 0042  
Ohio VAP: CL0065  
Pennsylvania: 68-00791  
West Virginia Certification #: 330

Enclosures

#### REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: MI Plaza/M01046

Pace Project No.: 5031839

Lab ID	Sample ID	Matrix	Date Collected	Date Received
5031839001	MMW-P-01	Water	11/03/09 10:20	11/04/09 10:45
5031839002	MMW-P02	Water	11/03/09 09:00	11/04/09 10:45
5031839003	MMW-P-03S	Water	11/03/09 09:33	11/04/09 10:45
5031839004	MMW-P-03D	Water	11/03/09 09:16	11/04/09 10:45
5031839005	MMW-P-05	Water	11/03/09 09:58	11/04/09 10:45
5031839006	MMW-P-06	Water	11/03/09 12:01	11/04/09 10:45
5031839007	MMW-P-07	Water	11/03/09 10:58	11/04/09 10:45
5031839008	MMW-P-08	Water	11/03/09 10:53	11/04/09 10:45
5031839009	MMW-P-09S	Water	11/03/09 13:16	11/04/09 10:45
5031839010	MMW-P-09D	Water	11/03/09 13:38	11/04/09 10:45
5031839011	MMW-P-10S	Water	11/03/09 11:37	11/04/09 10:45
5031839012	MMW-P-10D	Water	11/03/09 11:21	11/04/09 10:45
5031839013	MMW-C-01	Water	11/03/09 14:25	11/04/09 10:45
5031839014	MMW-C-02	Water	11/03/09 14:00	11/04/09 10:45
5031839015	Dup 1	Water	11/03/09 08:00	11/04/09 10:45
5031839016	Dup 2	Water	11/03/09 08:00	11/04/09 10:45
5031839017	Trip Blank	Water	11/03/09 08:00	11/04/09 10:45

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: MI Plaza/M01046  
Pace Project No.: 5031839

Lab ID	Sample ID	Method	Analysts	Analytes Reported
5031839001	MMW-P-01	EPA 8260	SLB	18
5031839002	MMW-P02	EPA 8260	SLB	18
5031839003	MMW-P-03S	ASTM D516-90,02 EPA 353.2 EPA 8260 SM 2340B	TPD CLS SLB FRW	1 1 18 1
5031839004	MMW-P-03D	ASTM D516-90,02 EPA 353.2 EPA 8260	TPD CLS SLB	1 1 18
5031839005	MMW-P-05	EPA 8260	SLB	18
5031839006	MMW-P-06	ASTM D516-90,02 EPA 353.2 EPA 8260	TPD CLS SLB	1 1 18
5031839007	MMW-P-07	EPA 8260	SLB	18
5031839008	MMW-P-08	ASTM D516-90,02 EPA 353.2 EPA 8260 SM 2340B	TPD CLS SLB FRW	1 1 18 1
5031839009	MMW-P-09S	ASTM D516-90,02 EPA 353.2 EPA 8260	TPD CLS SLB	1 1 18
5031839010	MMW-P-09D	EPA 8260	SLB	18
5031839011	MMW-P-10S	ASTM D516-90,02 EPA 353.2 EPA 8260	TPD CLS SLB	1 1 18
5031839012	MMW-P-10D	EPA 8260	SLB	18
5031839013	MMW-C-01	EPA 8260	SLB	18
5031839014	MMW-C-02	EPA 8260	SLB	18
5031839015	Dup 1	ASTM D516-90,02 EPA 353.2 EPA 8260 SM 2340B	TPD CLS SLB FRW	1 1 18 1
5031839016	Dup 2	EPA 8260	SLB	18
5031839017	Trip Blank	EPA 8260	SLB	18

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P-01	Lab ID: 5031839001	Collected: 11/03/09 10:20	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	50.0	10		11/06/09 14:05	71-43-2	1d,D4
Carbon tetrachloride	ND	ug/L	50.0	10		11/06/09 14:05	56-23-5	
Chloroform	ND	ug/L	50.0	10		11/06/09 14:05	67-66-3	
1,1-Dichloroethene	ND	ug/L	50.0	10		11/06/09 14:05	75-35-4	
cis-1,2-Dichloroethene	<b>9330</b>	ug/L	500	100		11/06/09 14:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	50.0	10		11/06/09 14:05	156-60-5	
Ethylbenzene	ND	ug/L	50.0	10		11/06/09 14:05	100-41-4	
Methylene chloride	ND	ug/L	50.0	10		11/06/09 14:05	75-09-2	
Naphthalene	ND	ug/L	50.0	10		11/06/09 14:05	91-20-3	
Tetrachloroethene	<b>103</b>	ug/L	50.0	10		11/06/09 14:05	127-18-4	
Toluene	ND	ug/L	50.0	10		11/06/09 14:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	50.0	10		11/06/09 14:05	71-55-6	
Trichloroethene	<b>58.3</b>	ug/L	50.0	10		11/06/09 14:05	79-01-6	
Vinyl chloride	<b>4770</b>	ug/L	200	100		11/06/09 14:35	75-01-4	
Xylene (Total)	ND	ug/L	100	10		11/06/09 14:05	1330-20-7	
Dibromofluoromethane (S)	98 %		80-123	10		11/06/09 14:05	1868-53-7	
4-Bromofluorobenzene (S)	102 %		70-126	10		11/06/09 14:05	460-00-4	
Toluene-d8 (S)	99 %		80-116	10		11/06/09 14:05	2037-26-5	

Date: 11/17/2009 02:21 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P02	Lab ID: 5031839002	Collected: 11/03/09 09:00	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/05/09 19:11	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/05/09 19:11	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/05/09 19:11	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/05/09 19:11	75-35-4	
cis-1,2-Dichloroethene	<b>60.1</b>	ug/L	5.0	1		11/05/09 19:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/05/09 19:11	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/05/09 19:11	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/05/09 19:11	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/05/09 19:11	91-20-3	
Tetrachloroethene	<b>11.1</b>	ug/L	5.0	1		11/05/09 19:11	127-18-4	
Toluene	ND	ug/L	5.0	1		11/05/09 19:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/05/09 19:11	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/05/09 19:11	79-01-6	
Vinyl chloride	<b>73.9</b>	ug/L	2.0	1		11/05/09 19:11	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/05/09 19:11	1330-20-7	
Dibromofluoromethane (S)	100 %		80-123	1		11/05/09 19:11	1868-53-7	
4-Bromofluorobenzene (S)	104 %		70-126	1		11/05/09 19:11	460-00-4	
Toluene-d8 (S)	100 %		80-116	1		11/05/09 19:11	2037-26-5	

Date: 11/17/2009 02:21 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P-03S	Lab ID: 5031839003	Collected: 11/03/09 09:33	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2340B Hardness, Total (Calc.)</b>	Analytical Method: SM 2340B							
Total Hardness	<b>457</b>	mg/L	1.0	1		11/15/09 12:49		
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 15:06	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 15:06	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 15:06	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 15:06	75-35-4	
cis-1,2-Dichloroethene	<b>141</b>	ug/L	5.0	1		11/06/09 15:06	156-59-2	
trans-1,2-Dichloroethene	<b>16.1</b>	ug/L	5.0	1		11/06/09 15:06	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 15:06	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 15:06	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 15:06	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/06/09 15:06	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 15:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 15:06	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 15:06	79-01-6	
Vinyl chloride	<b>379</b>	ug/L	20.0	10		11/06/09 15:36	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 15:06	1330-20-7	
Dibromofluoromethane (S)	106	%	80-123	1		11/06/09 15:06	1868-53-7	
4-Bromofluorobenzene (S)	101	%	70-126	1		11/06/09 15:06	460-00-4	
Toluene-d8 (S)	98	%	80-116	1		11/06/09 15:06	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/04/09 14:07		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	<b>8.1</b>	mg/L	5.0	1		11/05/09 12:12	14808-79-8	

Date: 11/17/2009 02:21 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P-03D	Lab ID: 5031839004	Collected: 11/03/09 09:16	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 16:06	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 16:06	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 16:06	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 16:06	75-35-4	
cis-1,2-Dichloroethene	<b>8.5</b>	ug/L	5.0	1		11/06/09 16:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 16:06	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 16:06	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 16:06	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 16:06	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/06/09 16:06	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 16:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 16:06	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 16:06	79-01-6	
Vinyl chloride	<b>168</b>	ug/L	2.0	1		11/06/09 16:06	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 16:06	1330-20-7	
Dibromofluoromethane (S)	108 %		80-123	1		11/06/09 16:06	1868-53-7	
4-Bromofluorobenzene (S)	104 %		70-126	1		11/06/09 16:06	460-00-4	
Toluene-d8 (S)	96 %		80-116	1		11/06/09 16:06	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/04/09 14:02		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	ND	mg/L	5.0	1		11/05/09 12:12	14808-79-8	

Date: 11/17/2009 02:21 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P-05	Lab ID: 5031839005	Collected: 11/03/09 09:58	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 16:37	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 16:37	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 16:37	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 16:37	75-35-4	
cis-1,2-Dichloroethene	<b>7.6</b>	ug/L	5.0	1		11/06/09 16:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 16:37	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 16:37	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 16:37	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 16:37	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/06/09 16:37	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 16:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 16:37	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 16:37	79-01-6	
Vinyl chloride	<b>2.7</b>	ug/L	2.0	1		11/06/09 16:37	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 16:37	1330-20-7	
Dibromofluoromethane (S)	101 %		80-123	1		11/06/09 16:37	1868-53-7	
4-Bromofluorobenzene (S)	103 %		70-126	1		11/06/09 16:37	460-00-4	
Toluene-d8 (S)	96 %		80-116	1		11/06/09 16:37	2037-26-5	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P-06	Lab ID: 5031839006	Collected: 11/03/09 12:01	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 18:05	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 18:05	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 18:05	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 18:05	75-35-4	
cis-1,2-Dichloroethene	107	ug/L	5.0	1		11/06/09 18:05	156-59-2	
trans-1,2-Dichloroethene	15.2	ug/L	5.0	1		11/06/09 18:05	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 18:05	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 18:05	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 18:05	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/06/09 18:05	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 18:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 18:05	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 18:05	79-01-6	
Vinyl chloride	292	ug/L	20.0	10		11/06/09 18:34	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 18:05	1330-20-7	
Dibromofluoromethane (S)	103 %		80-123	1		11/06/09 18:05	1868-53-7	
4-Bromofluorobenzene (S)	103 %		70-126	1		11/06/09 18:05	460-00-4	
Toluene-d8 (S)	98 %		80-116	1		11/06/09 18:05	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/04/09 14:16		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	73.2	mg/L	12.5	1		11/05/09 12:12	14808-79-8	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P-07	Lab ID: 5031839007	Collected: 11/03/09 10:58	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 19:04	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 19:04	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 19:04	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 19:04	75-35-4	
cis-1,2-Dichloroethene	<b>809</b>	ug/L	50.0	10		11/06/09 19:33	156-59-2	
trans-1,2-Dichloroethene	<b>14.1</b>	ug/L	5.0	1		11/06/09 19:04	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 19:04	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 19:04	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 19:04	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/06/09 19:04	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 19:04	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 19:04	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 19:04	79-01-6	
Vinyl chloride	<b>1510</b>	ug/L	20.0	10		11/06/09 19:33	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 19:04	1330-20-7	
Dibromofluoromethane (S)	103 %		80-123	1		11/06/09 19:04	1868-53-7	
4-Bromofluorobenzene (S)	103 %		70-126	1		11/06/09 19:04	460-00-4	
Toluene-d8 (S)	97 %		80-116	1		11/06/09 19:04	2037-26-5	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P-08	Lab ID: 5031839008	Collected: 11/03/09 10:53	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2340B Hardness, Total (Calc.)</b>	Analytical Method: SM 2340B							
Total Hardness	<b>694</b> mg/L		1.0	1		11/15/09 12:55		
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		50.0	10		11/06/09 22:31	71-43-2	
Carbon tetrachloride	ND ug/L		50.0	10		11/06/09 22:31	56-23-5	
Chloroform	ND ug/L		50.0	10		11/06/09 22:31	67-66-3	
1,1-Dichloroethene	ND ug/L		50.0	10		11/06/09 22:31	75-35-4	
cis-1,2-Dichloroethene	<b>86.7</b> ug/L		50.0	10		11/06/09 22:31	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		50.0	10		11/06/09 22:31	156-60-5	
Ethylbenzene	ND ug/L		50.0	10		11/06/09 22:31	100-41-4	
Methylene chloride	ND ug/L		50.0	10		11/06/09 22:31	75-09-2	
Naphthalene	ND ug/L		50.0	10		11/06/09 22:31	91-20-3	
Tetrachloroethene	ND ug/L		50.0	10		11/06/09 22:31	127-18-4	1d
Toluene	ND ug/L		50.0	10		11/06/09 22:31	108-88-3	
1,1,1-Trichloroethane	ND ug/L		50.0	10		11/06/09 22:31	71-55-6	
Trichloroethene	ND ug/L		50.0	10		11/06/09 22:31	79-01-6	1d
Vinyl chloride	<b>2860</b> ug/L		20.0	10		11/06/09 22:31	75-01-4	
Xylene (Total)	ND ug/L		100	10		11/06/09 22:31	1330-20-7	
Dibromofluoromethane (S)	105 %		80-123	10		11/06/09 22:31	1868-53-7	
4-Bromofluorobenzene (S)	107 %		70-126	10		11/06/09 22:31	460-00-4	
Toluene-d8 (S)	99 %		80-116	10		11/06/09 22:31	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND mg/L		0.10	1		11/04/09 14:14		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	<b>23.6</b> mg/L		5.0	1		11/05/09 12:12	14808-79-8	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P-09S	Lab ID: 5031839009	Collected: 11/03/09 13:16	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 20:03	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 20:03	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 20:03	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 20:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 20:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 20:03	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 20:03	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 20:03	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 20:03	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/06/09 20:03	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 20:03	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 20:03	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 20:03	79-01-6	
Vinyl chloride	ND	ug/L	2.0	1		11/06/09 20:03	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 20:03	1330-20-7	
Dibromofluoromethane (S)	104 %		80-123	1		11/06/09 20:03	1868-53-7	
4-Bromofluorobenzene (S)	102 %		70-126	1		11/06/09 20:03	460-00-4	
Toluene-d8 (S)	99 %		80-116	1		11/06/09 20:03	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	<b>0.78</b>	mg/L	0.10	1		11/04/09 14:17		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	<b>87.2</b>	mg/L	25.0	1		11/05/09 12:12	14808-79-8	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P-09D	Lab ID: 5031839010	Collected: 11/03/09 13:38	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 14:50	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 14:50	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 14:50	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 14:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 14:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 14:50	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 14:50	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 14:50	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 14:50	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/06/09 14:50	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 14:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 14:50	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 14:50	79-01-6	
Vinyl chloride	87.1	ug/L	2.0	1		11/06/09 14:50	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 14:50	1330-20-7	
Dibromofluoromethane (S)	102 %		80-123	1		11/06/09 14:50	1868-53-7	
4-Bromofluorobenzene (S)	100 %		70-126	1		11/06/09 14:50	460-00-4	
Toluene-d8 (S)	94 %		80-116	1		11/06/09 14:50	2037-26-5	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P-10S	Lab ID: 5031839011	Collected: 11/03/09 11:37	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 15:21	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 15:21	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 15:21	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 15:21	75-35-4	
cis-1,2-Dichloroethene	<b>29.6</b>	ug/L	5.0	1		11/06/09 15:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 15:21	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 15:21	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 15:21	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 15:21	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/06/09 15:21	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 15:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 15:21	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 15:21	79-01-6	
Vinyl chloride	<b>288</b>	ug/L	2.0	1		11/06/09 15:21	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 15:21	1330-20-7	
Dibromofluoromethane (S)	108 %		80-123	1		11/06/09 15:21	1868-53-7	
4-Bromofluorobenzene (S)	99 %		70-126	1		11/06/09 15:21	460-00-4	
Toluene-d8 (S)	97 %		80-116	1		11/06/09 15:21	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/04/09 14:15		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	<b>9.5</b>	mg/L	5.0	1		11/05/09 12:12	14808-79-8	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-P-10D	Lab ID: 5031839012	Collected: 11/03/09 11:21	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 16:22	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 16:22	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 16:22	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 16:22	75-35-4	
cis-1,2-Dichloroethene	<b>2740</b>	ug/L	250	50		11/06/09 16:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 16:22	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 16:22	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 16:22	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 16:22	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/06/09 16:22	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 16:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 16:22	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 16:22	79-01-6	
Vinyl chloride	<b>3500</b>	ug/L	100	50		11/06/09 16:52	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 16:22	1330-20-7	
Dibromofluoromethane (S)	105 %		80-123	1		11/06/09 16:22	1868-53-7	
4-Bromofluorobenzene (S)	101 %		70-126	1		11/06/09 16:22	460-00-4	
Toluene-d8 (S)	98 %		80-116	1		11/06/09 16:22	2037-26-5	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-C-01	Lab ID: 5031839013	Collected: 11/03/09 14:25	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 17:21	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 17:21	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 17:21	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 17:21	75-35-4	
cis-1,2-Dichloroethene	<b>211</b>	ug/L	5.0	1		11/06/09 17:21	156-59-2	
trans-1,2-Dichloroethene	<b>8.9</b>	ug/L	5.0	1		11/06/09 17:21	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 17:21	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 17:21	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 17:21	91-20-3	
Tetrachloroethene	<b>12.6</b>	ug/L	5.0	1		11/06/09 17:21	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 17:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 17:21	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 17:21	79-01-6	
Vinyl chloride	<b>2720</b>	ug/L	50.0	25		11/09/09 12:18	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 17:21	1330-20-7	
Dibromofluoromethane (S)	101 %		80-123	1		11/06/09 17:21	1868-53-7	
4-Bromofluorobenzene (S)	99 %		70-126	1		11/06/09 17:21	460-00-4	
Toluene-d8 (S)	100 %		80-116	1		11/06/09 17:21	2037-26-5	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: MMW-C-02	Lab ID: 5031839014	Collected: 11/03/09 14:00	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 17:50	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 17:50	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 17:50	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 17:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 17:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 17:50	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 17:50	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 17:50	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 17:50	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/06/09 17:50	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 17:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 17:50	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 17:50	79-01-6	
Vinyl chloride	ND	ug/L	2.0	1		11/06/09 17:50	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 17:50	1330-20-7	
Dibromofluoromethane (S)	104 %		80-123	1		11/06/09 17:50	1868-53-7	
4-Bromofluorobenzene (S)	97 %		70-126	1		11/06/09 17:50	460-00-4	
Toluene-d8 (S)	98 %		80-116	1		11/06/09 17:50	2037-26-5	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: Dup 1	Lab ID: 5031839015	Collected: 11/03/09 08:00	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2340B Hardness, Total (Calc.)</b>	Analytical Method: SM 2340B							
Total Hardness	711	mg/L	1.0	1		11/15/09 13:00		
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	50.0	10		11/06/09 18:49	71-43-2	1d,D4
Carbon tetrachloride	ND	ug/L	50.0	10		11/06/09 18:49	56-23-5	
Chloroform	ND	ug/L	50.0	10		11/06/09 18:49	67-66-3	
1,1-Dichloroethene	ND	ug/L	50.0	10		11/06/09 18:49	75-35-4	
cis-1,2-Dichloroethene	91.5	ug/L	50.0	10		11/06/09 18:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	50.0	10		11/06/09 18:49	156-60-5	
Ethylbenzene	ND	ug/L	50.0	10		11/06/09 18:49	100-41-4	
Methylene chloride	ND	ug/L	50.0	10		11/06/09 18:49	75-09-2	
Naphthalene	ND	ug/L	50.0	10		11/06/09 18:49	91-20-3	
Tetrachloroethene	ND	ug/L	50.0	10		11/06/09 18:49	127-18-4	
Toluene	ND	ug/L	50.0	10		11/06/09 18:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	50.0	10		11/06/09 18:49	71-55-6	
Trichloroethene	ND	ug/L	50.0	10		11/06/09 18:49	79-01-6	
Vinyl chloride	2630	ug/L	20.0	10		11/06/09 18:49	75-01-4	
Xylene (Total)	ND	ug/L	100	10		11/06/09 18:49	1330-20-7	
Dibromofluoromethane (S)	100	%	80-123	10		11/06/09 18:49	1868-53-7	
4-Bromofluorobenzene (S)	104	%	70-126	10		11/06/09 18:49	460-00-4	
Toluene-d8 (S)	101	%	80-116	10		11/06/09 18:49	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/04/09 14:01		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	22.2	mg/L	5.0	1		11/05/09 12:12	14808-79-8	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: Dup 2	Lab ID: 5031839016	Collected: 11/03/09 08:00	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	50.0	10		11/06/09 19:48	71-43-2	
Carbon tetrachloride	ND	ug/L	50.0	10		11/06/09 19:48	56-23-5	
Chloroform	ND	ug/L	50.0	10		11/06/09 19:48	67-66-3	
1,1-Dichloroethene	ND	ug/L	50.0	10		11/06/09 19:48	75-35-4	
cis-1,2-Dichloroethene	<b>2180</b>	ug/L	50.0	10		11/06/09 19:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	50.0	10		11/06/09 19:48	156-60-5	
Ethylbenzene	ND	ug/L	50.0	10		11/06/09 19:48	100-41-4	
Methylene chloride	ND	ug/L	50.0	10		11/06/09 19:48	75-09-2	
Naphthalene	ND	ug/L	50.0	10		11/06/09 19:48	91-20-3	
Tetrachloroethene	ND	ug/L	50.0	10		11/06/09 19:48	127-18-4	
Toluene	ND	ug/L	50.0	10		11/06/09 19:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	50.0	10		11/06/09 19:48	71-55-6	
Trichloroethene	ND	ug/L	50.0	10		11/06/09 19:48	79-01-6	
Vinyl chloride	<b>3410</b>	ug/L	200	100		11/06/09 20:17	75-01-4	
Xylene (Total)	ND	ug/L	100	10		11/06/09 19:48	1330-20-7	
Dibromofluoromethane (S)	103 %		80-123	10		11/06/09 19:48	1868-53-7	
4-Bromofluorobenzene (S)	101 %		70-126	10		11/06/09 19:48	460-00-4	
Toluene-d8 (S)	100 %		80-116	10		11/06/09 19:48	2037-26-5	

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## ANALYTICAL RESULTS

Project: MI Plaza/M01046

Pace Project No.: 5031839

Sample: Trip Blank	Lab ID: 5031839017	Collected: 11/03/09 08:00	Received: 11/04/09 10:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/06/09 23:31	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/06/09 23:31	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/06/09 23:31	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/06/09 23:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 23:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/06/09 23:31	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/06/09 23:31	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/06/09 23:31	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/06/09 23:31	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/06/09 23:31	127-18-4	
Toluene	ND	ug/L	5.0	1		11/06/09 23:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/06/09 23:31	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/06/09 23:31	79-01-6	
Vinyl chloride	ND	ug/L	2.0	1		11/06/09 23:31	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/06/09 23:31	1330-20-7	
Dibromofluoromethane (S)	102 %		80-123	1		11/06/09 23:31	1868-53-7	
4-Bromofluorobenzene (S)	96 %		70-126	1		11/06/09 23:31	460-00-4	
Toluene-d8 (S)	93 %		80-116	1		11/06/09 23:31	2037-26-5	

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## QUALITY CONTROL DATA

Project: MI Plaza/M01046

Pace Project No.: 5031839

QC Batch: WETA/4342 Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.

Associated Lab Samples: 5031839003, 5031839004, 5031839006, 5031839008, 5031839009, 5031839011, 5031839015

METHOD BLANK: 363529 Matrix: Water

Associated Lab Samples: 5031839003, 5031839004, 5031839006, 5031839008, 5031839009, 5031839011, 5031839015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	11/04/09 13:59	

LABORATORY CONTROL SAMPLE: 363530

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.90	90	90-110	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 363531 363532

Parameter	Units	5031839004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Max Qual
Nitrogen, Nitrate	mg/L	ND	1	1	0.87	0.87	83	84	90-110	.1	20	M3

## QUALITY CONTROL DATA

Project: MI Plaza/M01046

Pace Project No.: 5031839

QC Batch: WETA/4344 Analysis Method: ASTM D516-90,02

QC Batch Method: ASTM D516-90,02 Analysis Description: ASTM D516-9002 Sulfate Water

Associated Lab Samples: 5031839003, 5031839004, 5031839006, 5031839008, 5031839009, 5031839011, 5031839015

METHOD BLANK: 363783 Matrix: Water

Associated Lab Samples: 5031839003, 5031839004, 5031839006, 5031839008, 5031839009, 5031839011, 5031839015

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Sulfate	mg/L	ND	5.0	11/05/09 12:12	

LABORATORY CONTROL SAMPLE: 363784

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Sulfate	mg/L	20	19.2	96	90-110	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 363785 363786

Parameter	Units	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Max	RPD	RPD	Qual
		5031794002	Spike	Spike	Result	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Sulfate	mg/L	135	200	200	349	351	107	108	108	75-125	.6	20	

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## **QUALITY CONTROL DATA**

Project: MI Plaza/M01046

Pace Project No.: 5031839

QC Batch: MSV/19742

QC Batch Method: EPA 8260

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METHOD PLANS 224242

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Martin Weller

Associated Lab Samples: 5031830002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	11/05/09 09:47	
1,1-Dichloroethene	ug/L	ND	5.0	11/05/09 09:47	
Benzene	ug/L	ND	5.0	11/05/09 09:47	
Carbon tetrachloride	ug/L	ND	5.0	11/05/09 09:47	
Chloroform	ug/L	ND	5.0	11/05/09 09:47	
cis-1,2-Dichloroethene	ug/L	ND	5.0	11/05/09 09:47	
Ethylbenzene	ug/L	ND	5.0	11/05/09 09:47	
Methylene chloride	ug/L	ND	5.0	11/05/09 09:47	
Naphthalene	ug/L	ND	5.0	11/05/09 09:47	
Tetrachloroethene	ug/L	ND	5.0	11/05/09 09:47	
Toluene	ug/L	ND	5.0	11/05/09 09:47	
trans-1,2-Dichloroethene	ug/L	ND	5.0	11/05/09 09:47	
Trichloroethene	ug/L	ND	5.0	11/05/09 09:47	
Vinyl chloride	ug/L	ND	2.0	11/05/09 09:47	
Xylene (Total)	ug/L	ND	10.0	11/05/09 09:47	
4-Bromofluorobenzene (S)	%	106	70-126	11/05/09 09:47	
Dibromofluoromethane (S)	%	99	80-123	11/05/09 09:47	
Toluene-d8 (S)	%	103	80-116	11/05/09 09:47	

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LABORATORY CONTROL SAMPLE: 364250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.9	102	69-136	
1,1-Dichloroethene	ug/L	50	47.9	96	63-128	
Benzene	ug/L	50	48.2	96	78-127	
Carbon tetrachloride	ug/L	50	49.6	99	62-143	
Chloroform	ug/L	50	50.7	101	74-131	
cis-1,2-Dichloroethene	ug/L	50	49.1	98	74-128	
Ethylbenzene	ug/L	50	50.2	100	81-126	
Methylene chloride	ug/L	50	48.9	98	32-164	
Naphthalene	ug/L	50	54.9	110	61-135	
Tetrachloroethene	ug/L	50	48.1	96	60-119	
Toluene	ug/L	50	49.4	99	75-129	
trans-1,2-Dichloroethene	ug/L	50	52.0	104	71-126	
Trichloroethene	ug/L	50	50.4	101	74-130	
Vinyl chloride	ug/L	50	44.3	89	55-141	
Xylene (Total)	ug/L	150	143	95	76-132	
4-Bromofluorobenzene (S)	%			103	70-126	
Dibromofluoromethane (S)	%			99	80-123	
Toluene-d8 (S)	%			97	80-116	

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## QUALITY CONTROL DATA

Project: MI Plaza/M01046

Pace Project No.: 5031839

QC Batch:	MSV/19774	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples: 5031839001, 5031839003, 5031839004, 5031839005, 5031839006, 5031839007, 5031839009			

METHOD BLANK:	365035	Matrix:	Water
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Associated Lab Samples: 5031839001, 5031839003, 5031839004, 5031839005, 5031839006, 5031839007, 5031839009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	11/06/09 11:04	
1,1-Dichloroethene	ug/L	ND	5.0	11/06/09 11:04	
Benzene	ug/L	ND	5.0	11/06/09 11:04	
Carbon tetrachloride	ug/L	ND	5.0	11/06/09 11:04	
Chloroform	ug/L	ND	5.0	11/06/09 11:04	
cis-1,2-Dichloroethene	ug/L	ND	5.0	11/06/09 11:04	
Ethylbenzene	ug/L	ND	5.0	11/06/09 11:04	
Methylene chloride	ug/L	ND	5.0	11/06/09 11:04	
Naphthalene	ug/L	ND	5.0	11/06/09 11:04	
Tetrachloroethene	ug/L	ND	5.0	11/06/09 11:04	
Toluene	ug/L	ND	5.0	11/06/09 11:04	
trans-1,2-Dichloroethene	ug/L	ND	5.0	11/06/09 11:04	
Trichloroethene	ug/L	ND	5.0	11/06/09 11:04	
Vinyl chloride	ug/L	ND	2.0	11/06/09 11:04	
Xylene (Total)	ug/L	ND	10.0	11/06/09 11:04	
4-Bromofluorobenzene (S)	%	103	70-126	11/06/09 11:04	
Dibromofluoromethane (S)	%	98	80-123	11/06/09 11:04	
Toluene-d8 (S)	%	98	80-116	11/06/09 11:04	

LABORATORY CONTROL SAMPLE: 365036

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	55.9	112	69-136	
1,1-Dichloroethene	ug/L	50	49.5	99	63-128	
Benzene	ug/L	50	50.1	100	78-127	
Carbon tetrachloride	ug/L	50	60.1	120	62-143	
Chloroform	ug/L	50	50.7	101	74-131	
cis-1,2-Dichloroethene	ug/L	50	52.0	104	74-128	
Ethylbenzene	ug/L	50	50.4	101	81-126	
Methylene chloride	ug/L	50	61.0	122	32-164	
Naphthalene	ug/L	50	54.9	110	61-135	
Tetrachloroethene	ug/L	50	46.4	93	60-119	
Toluene	ug/L	50	50.9	102	75-129	
trans-1,2-Dichloroethene	ug/L	50	57.4	115	71-126	
Trichloroethene	ug/L	50	50.0	100	74-130	
Vinyl chloride	ug/L	50	47.2	94	55-141	
Xylene (Total)	ug/L	150	146	98	76-132	
4-Bromofluorobenzene (S)	%			101	70-126	
Dibromofluoromethane (S)	%			99	80-123	
Toluene-d8 (S)	%			97	80-116	

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## QUALITY CONTROL DATA

Project: MI Plaza/M01046

Pace Project No.: 5031839

Parameter	Units	5031839005		MS		MSD		MS		MSD		% Rec		Max	
		Result	Conc.	Spike	Conc.	Result	MSD	Result	% Rec	MSD	% Rec	Limits	RPD	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	50	50	63.1	66.1	126	132	64-143	5	20				
1,1-Dichloroethene	ug/L	ND	50	50	68.1	65.0	136	130	55-140	5	20				
Benzene	ug/L	ND	50	50	51.8	55.1	104	110	63-141	6	20				
Carbon tetrachloride	ug/L	ND	50	50	69.9	72.6	140	145	54-145	4	20				
Chloroform	ug/L	ND	50	50	56.9	56.9	114	114	67-134	.07	20				
cis-1,2-Dichloroethene	ug/L	7.6	50	50	67.8	65.2	120	115	65-132	4	20				
Ethylbenzene	ug/L	ND	50	50	50.7	53.5	101	107	44-151	5	20				
Methylene chloride	ug/L	ND	50	50	68.8	65.1	138	130	46-154	6	20				
Naphthalene	ug/L	ND	50	50	38.5	48.2	77	96	44-138	23	20	R1			
Tetrachloroethene	ug/L	ND	50	50	47.5	52.4	95	105	25-146	10	20				
Toluene	ug/L	ND	50	50	51.5	55.4	103	111	59-142	7	20				
trans-1,2-Dichloroethene	ug/L	ND	50	50	65.3	67.9	131	136	60-137	4	20				
Trichloroethene	ug/L	ND	50	50	52.5	56.8	105	114	61-137	8	20				
Vinyl chloride	ug/L	2.7	50	50	66.5	65.6	128	126	51-144	1	20				
Xylene (Total)	ug/L	ND	150	150	148	160	99	107	44-152	8	20				
4-Bromofluorobenzene (S)	%						105	104	70-126		20				
Dibromofluoromethane (S)	%							114	103	80-123		20			
Toluene-d8 (S)	%							101	100	80-116		20			

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## QUALITY CONTROL DATA

Project: MI Plaza/M01046

Pace Project No.: 5031839

QC Batch:	MSV/19779	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	5031839008, 5031839017		

METHOD BLANK:	365055	Matrix: Water
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Associated Lab Samples: 5031839008, 5031839017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	11/06/09 22:02	
1,1-Dichloroethene	ug/L	ND	5.0	11/06/09 22:02	
Benzene	ug/L	ND	5.0	11/06/09 22:02	
Carbon tetrachloride	ug/L	ND	5.0	11/06/09 22:02	
Chloroform	ug/L	ND	5.0	11/06/09 22:02	
cis-1,2-Dichloroethene	ug/L	ND	5.0	11/06/09 22:02	
Ethylbenzene	ug/L	ND	5.0	11/06/09 22:02	
Methylene chloride	ug/L	ND	5.0	11/06/09 22:02	
Naphthalene	ug/L	ND	5.0	11/06/09 22:02	
Tetrachloroethene	ug/L	ND	5.0	11/06/09 22:02	
Toluene	ug/L	ND	5.0	11/06/09 22:02	
trans-1,2-Dichloroethene	ug/L	ND	5.0	11/06/09 22:02	
Trichloroethene	ug/L	ND	5.0	11/06/09 22:02	
Vinyl chloride	ug/L	ND	2.0	11/06/09 22:02	
Xylene (Total)	ug/L	ND	10.0	11/06/09 22:02	
4-Bromofluorobenzene (S)	%	106	70-126	11/06/09 22:02	
Dibromofluoromethane (S)	%	103	80-123	11/06/09 22:02	
Toluene-d8 (S)	%	96	80-116	11/06/09 22:02	

LABORATORY CONTROL SAMPLE: 365056

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	55.0	110	69-136	
1,1-Dichloroethene	ug/L	50	49.5	99	63-128	
Benzene	ug/L	50	48.5	97	78-127	
Carbon tetrachloride	ug/L	50	59.2	118	62-143	
Chloroform	ug/L	50	50.0	100	74-131	
cis-1,2-Dichloroethene	ug/L	50	50.6	101	74-128	
Ethylbenzene	ug/L	50	47.2	94	81-126	
Methylene chloride	ug/L	50	58.3	117	32-164	
Naphthalene	ug/L	50	50.3	101	61-135	
Tetrachloroethene	ug/L	50	44.0	88	60-119	
Toluene	ug/L	50	47.8	96	75-129	
trans-1,2-Dichloroethene	ug/L	50	53.9	108	71-126	
Trichloroethene	ug/L	50	49.6	99	74-130	
Vinyl chloride	ug/L	50	47.0	94	55-141	
Xylene (Total)	ug/L	150	140	93	76-132	
4-Bromofluorobenzene (S)	%			101	70-126	
Dibromofluoromethane (S)	%			104	80-123	
Toluene-d8 (S)	%			96	80-116	

Date: 11/17/2009 02:21 PM

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: MI Plaza/M01046

Pace Project No.: 5031839

QC Batch:	MSV/19791	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples: 5031839010, 5031839011, 5031839012, 5031839013, 5031839014, 5031839015, 5031839016			

METHOD BLANK:	365127	Matrix:	Water
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Associated Lab Samples: 5031839010, 5031839011, 5031839012, 5031839013, 5031839014, 5031839015, 5031839016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	11/06/09 12:19	
1,1-Dichloroethene	ug/L	ND	5.0	11/06/09 12:19	
Benzene	ug/L	ND	5.0	11/06/09 12:19	
Carbon tetrachloride	ug/L	ND	5.0	11/06/09 12:19	
Chloroform	ug/L	ND	5.0	11/06/09 12:19	
cis-1,2-Dichloroethene	ug/L	ND	5.0	11/06/09 12:19	
Ethylbenzene	ug/L	ND	5.0	11/06/09 12:19	
Methylene chloride	ug/L	ND	5.0	11/06/09 12:19	
Naphthalene	ug/L	ND	5.0	11/06/09 12:19	
Tetrachloroethene	ug/L	ND	5.0	11/06/09 12:19	
Toluene	ug/L	ND	5.0	11/06/09 12:19	
trans-1,2-Dichloroethene	ug/L	ND	5.0	11/06/09 12:19	
Trichloroethene	ug/L	ND	5.0	11/06/09 12:19	
Vinyl chloride	ug/L	ND	2.0	11/06/09 12:19	
Xylene (Total)	ug/L	ND	10.0	11/06/09 12:19	
4-Bromofluorobenzene (S)	%	102	70-126	11/06/09 12:19	
Dibromofluoromethane (S)	%	99	80-123	11/06/09 12:19	
Toluene-d8 (S)	%	99	80-116	11/06/09 12:19	

LABORATORY CONTROL SAMPLE: 365128

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.6	107	69-136	
1,1-Dichloroethene	ug/L	50	49.8	100	63-128	
Benzene	ug/L	50	49.6	99	78-127	
Carbon tetrachloride	ug/L	50	52.7	105	62-143	
Chloroform	ug/L	50	51.5	103	74-131	
cis-1,2-Dichloroethene	ug/L	50	50.6	101	74-128	
Ethylbenzene	ug/L	50	50.0	100	81-126	
Methylene chloride	ug/L	50	54.7	109	32-164	
Naphthalene	ug/L	50	48.8	98	61-135	
Tetrachloroethene	ug/L	50	47.9	96	60-119	
Toluene	ug/L	50	50.1	100	75-129	
trans-1,2-Dichloroethene	ug/L	50	52.5	105	71-126	
Trichloroethene	ug/L	50	49.7	99	74-130	
Vinyl chloride	ug/L	50	48.5	97	55-141	
Xylene (Total)	ug/L	150	152	101	76-132	
4-Bromofluorobenzene (S)	%			101	70-126	
Dibromofluoromethane (S)	%			100	80-123	
Toluene-d8 (S)	%			101	80-116	

Date: 11/17/2009 02:21 PM

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: MI Plaza/M01046

Pace Project No.: 5031839

MATRIX SPIKE SAMPLE:	365129						
Parameter	Units	5031839014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	50	60.0	120	64-143	
1,1-Dichloroethene	ug/L	ND	50	59.8	120	55-140	
Benzene	ug/L	ND	50	51.9	104	63-141	
Carbon tetrachloride	ug/L	ND	50	60.2	120	54-145	
Chloroform	ug/L	ND	50	54.7	109	67-134	
cis-1,2-Dichloroethene	ug/L	ND	50	52.6	105	65-132	
Ethylbenzene	ug/L	ND	50	48.6	97	44-151	
Methylene chloride	ug/L	ND	50	55.8	112	46-154	
Naphthalene	ug/L	ND	50	43.3	87	44-138	
Tetrachloroethene	ug/L	ND	50	50.3	101	25-146	
Toluene	ug/L	ND	50	50.8	102	59-142	
trans-1,2-Dichloroethene	ug/L	ND	50	57.8	116	60-137	
Trichloroethene	ug/L	ND	50	54.7	109	61-137	
Vinyl chloride	ug/L	ND	50	56.1	112	51-144	
Xylene (Total)	ug/L	ND	150	147	98	44-152	
4-Bromofluorobenzene (S)	%				101	70-126	
Dibromofluoromethane (S)	%				102	80-123	
Toluene-d8 (S)	%				97	80-116	

Date: 11/17/2009 02:21 PM

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: MI Plaza/M01046  
Pace Project No.: 5031839

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

### ANALYTE QUALIFIERS

1d Compound evaluated to 5ug/L per MDL. slb11/09/09

D4 Sample was diluted due to the presence of high levels of target analytes.

M3 Matrix spike recovery was outside laboratory control limits due to matrix interferences.

R1 RPD value was outside control limits.

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:																																																																																																																																																																																											
Company: <u>Mark's Lab Inc.</u> Address: <u>110 S. Downing Ave</u> Email T/C: <u>Analys, INC. 4209</u>		Report To: <u>Lesser Lohse</u> Copy To: <u></u> Purchase Order No.: <u></u>		Attention: <u>Mark Lohse</u> Company Name: <u>Mark Lohse</u> Address: <u></u> Pace Quote Reference: <u></u> Pace Project Manager: <u></u> Pace Profile #: <u></u>																																																																																																																																																																																											
				REGULATORY AGENCY <input type="checkbox"/> NPDES <input checked="" type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER																																																																																																																																																																																											
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				<table border="1"> <thead> <tr> <th colspan="2"># OF CONTAINERS</th> <th colspan="4">SAMPLE TEMP AT COLLECTION</th> </tr> <tr> <th colspan="2">Matrix Codes</th> <th colspan="4">Preservatives</th> </tr> <tr> <th colspan="2">MATRIX / CODE</th> <th colspan="2">COLLECTED</th> <th colspan="2">ANALYSIS TEST</th> </tr> <tr> <td colspan="2">Drinking Water</td> <td colspan="2">COMPOSITE ENDGRAB</td> <td colspan="2">HCl</td> </tr> <tr> <td colspan="2">Waste Water</td> <td colspan="2">COMPOSITE START</td> <td colspan="2">HNO<sub>3</sub></td> </tr> <tr> <td colspan="2">Product</td> <td colspan="2">Oil/Solid</td> <td colspan="2">Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td colspan="2">Soil/Solid</td> <td colspan="2">Oil</td> <td colspan="2">Other</td> </tr> <tr> <td colspan="2">Oil</td> <td colspan="2">Wipe</td> <td colspan="2">H<sub>2</sub>SO<sub>4</sub></td> </tr> <tr> <td colspan="2">Wipe</td> <td colspan="2">Air</td> <td colspan="2">HClO</td> </tr> <tr> <td colspan="2">Air</td> <td colspan="2">TS</td> <td colspan="2">NaOH</td> </tr> <tr> <td colspan="2">Tissue</td> <td colspan="2">OT</td> <td colspan="2">Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td colspan="2">Other</td> <td colspan="2"></td> <td colspan="2"></td> </tr> </thead> <tbody> <tr> <td colspan="2">SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE</td> <td colspan="2">DATE</td> <td colspan="2">TIME</td> </tr> <tr> <td colspan="2">#</td> <td colspan="2">TIME</td> <td colspan="2">DATE</td> </tr> <tr> <td colspan="2">TEME</td> <td colspan="2">TIME</td> <td colspan="2">DATE</td> </tr> <tr> <td colspan="2">1 MMW-P-01</td> <td colspan="2">07</td> <td colspan="2">10:30A</td> </tr> <tr> <td colspan="2">2 MMW-P-02</td> <td colspan="2">1</td> <td colspan="2">9:00A</td> </tr> <tr> <td colspan="2">3 MMW-P-03S</td> <td colspan="2">1</td> <td colspan="2">9:33A</td> </tr> <tr> <td colspan="2">4 MMW-P-03D</td> <td colspan="2">1</td> <td colspan="2">9:46A</td> </tr> <tr> <td colspan="2">5 MMW-P-05 (M31NSD2)</td> <td colspan="2">1</td> <td colspan="2">9:50A</td> </tr> <tr> <td colspan="2">6 MMW-P-06</td> <td colspan="2">1</td> <td colspan="2">10:11A</td> </tr> <tr> <td colspan="2">7 MMW-P-07</td> <td colspan="2">1</td> <td colspan="2">10:38A</td> </tr> <tr> <td colspan="2">8 MMW-P-08</td> <td colspan="2">1</td> <td colspan="2">10:53A</td> </tr> <tr> <td colspan="2">9 MMW-P-09S</td> <td colspan="2">1</td> <td colspan="2">11:14A</td> </tr> <tr> <td colspan="2">10 MMW-P-09P</td> <td colspan="2">1</td> <td colspan="2">11:38A</td> </tr> <tr> <td colspan="2">11 MMW-P-10S</td> <td colspan="2">1</td> <td colspan="2">11:54A</td> </tr> <tr> <td colspan="2">12 MMW-P-10D</td> <td colspan="2">1</td> <td colspan="2">11:24A</td> </tr> <tr> <td colspan="2">ADDITIONAL COMMENTS</td> <td colspan="2">TIME</td> <td colspan="2">DATE</td> </tr> <tr> <td colspan="2"><u>*Please use short list</u></td> <td colspan="2">10:45</td> <td colspan="2">11/16/05</td> </tr> <tr> <td colspan="2"><u>for VOC's. Dilute!</u></td> <td colspan="2">10:45</td> <td colspan="2">11/16/05</td> </tr> <tr> <td colspan="2"><u>Scalping has short hold time</u></td> <td colspan="2">10:45</td> <td colspan="2">11/16/05</td> </tr> </tbody> </table>		# OF CONTAINERS		SAMPLE TEMP AT COLLECTION				Matrix Codes		Preservatives				MATRIX / CODE		COLLECTED		ANALYSIS TEST		Drinking Water		COMPOSITE ENDGRAB		HCl		Waste Water		COMPOSITE START		HNO <sub>3</sub>		Product		Oil/Solid		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>		Soil/Solid		Oil		Other		Oil		Wipe		H <sub>2</sub> SO <sub>4</sub>		Wipe		Air		HClO		Air		TS		NaOH		Tissue		OT		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>		Other						SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE		DATE		TIME		#		TIME		DATE		TEME		TIME		DATE		1 MMW-P-01		07		10:30A		2 MMW-P-02		1		9:00A		3 MMW-P-03S		1		9:33A		4 MMW-P-03D		1		9:46A		5 MMW-P-05 (M31NSD2)		1		9:50A		6 MMW-P-06		1		10:11A		7 MMW-P-07		1		10:38A		8 MMW-P-08		1		10:53A		9 MMW-P-09S		1		11:14A		10 MMW-P-09P		1		11:38A		11 MMW-P-10S		1		11:54A		12 MMW-P-10D		1		11:24A		ADDITIONAL COMMENTS		TIME		DATE		<u>*Please use short list</u>		10:45		11/16/05		<u>for VOC's. Dilute!</u>		10:45		11/16/05		<u>Scalping has short hold time</u>		10:45		11/16/05	
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				Received on (Y/N)	Received on (Y/N)																																																																																																																																																																																										
				Custodial Collector (Y/N)	Custodial Collector (Y/N)																																																																																																																																																																																										
				Samples intact (Y/N)	Samples intact (Y/N)																																																																																																																																																																																										

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for all invoices not paid within 30 days.



**CHAIN-OF-CUSTODY / Analytical Request Document**

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



# Sample Condition Upon Receipt

Client Name: Mundell & Assoc. Project # 5031839

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: \_\_\_\_\_

Optional:
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 123456 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 1.9

Biological Tissue Is Frozen: Yes No

Date and Initials of person examining contents: 11/4/09 ZT

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>Water</u>
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed _____ Lot # of added preservative _____
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

## Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Project Manager Review:

J. Dwyer

Date: 11/4/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

CLIENT: Mondell & Associates

COC PAGE 1 of 2  
COC ID# 1320221

Project # 2031837

Pace Analytical  
U.S. EPA 8085 & 2209

Sample Line:

Item	DG9H	AG1U	WG FU R	4 / 6	BP2N	BP2U	BP2S	BP3N	BP3U	BP3S	AG3S	AG1H	Comments
1	3												
2	3												
3	3							1	1				
4	3								1				
5	9												
6	3							1					
7	3												
8	3							1	1				
9	3								1				
10	3									1			
11	3										1		
12	3												

• Container Codes

DG9H	40mL HCl amber vial	AF	Air Filter	BP1N	1 liter HNO3 plastic	BP1N	1 liter HNO3 plastic	BP1S	1 liter HCl amber glass	BP1S	1 liter H2SO4 plastic	BP1S	40mL TSP amber vial
AG1U	1liter unpreserved amber glass	AG1H	1 liter HCl amber glass	BP1U	1 liter H2SO4 plastic	BP1U	1 liter H2SO4 plastic	BP1U	1 liter unpreserved plastic	BP1U	1 liter Na Thiosulfate amber gl	BP1Z	40mL Na Thio amber vial
WG FU	4oz clear soil jar	AG1S	1 liter H2SO4 amber glass	BP1Z	1 liter Na Thiosulfate amber gl	BP1Z	1 liter Na OH, Zn, Ac	BP1Z	1 liter unpreserved plastic	BP1Z	1 liter Na Thiosulfate amber gl	BP1Z	40mL unpreserved amber vial
R	Terra core kit	AG1T	1 liter Na Thiosulfate amber gl	BP2A	500mL NaOH, Asc Acid plastic	BP2A	500mL NaOH, Asc Acid plastic	BP2A	500mL NaOH, Asc Acid plastic	BP2A	500mL NaOH, Asc Acid plastic	BP2A	40mL Wipe/Swab
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2O	500mL NaOH plastic	BP2O	500mL NaOH plastic	BP2O	500mL NaOH plastic	BP2O	500mL NaOH plastic	BP2O	4oz unpreserved amber wide
BP2U	500mL unpreserved plastic	AG2S	500mL H2SO4 amber glass	BP2Z	500mL NaOH, Zn Ac	BP2Z	500mL NaOH, Zn Ac	BP2Z	500mL NaOH, Zn Ac	BP2Z	500mL NaOH, Zn Ac	BP2Z	Summa Can
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber glass	BP3A	250mL NaOH, Asc Acid plastic	BP3A	250mL NaOH, Asc Acid plastic	BP3A	250mL NaOH, Asc Acid plastic	BP3A	250mL NaOH, Asc Acid plastic	BP3A	40mL HCL clear vial
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber glass	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	40mL Na Thio. clear vial
BP3U	250mL unpreserved plastic	BP1H	1 liter HCl clear glass	BP3Z	250mL NaOH, Zn Ac plastic	BP3Z	250mL NaOH, Zn Ac plastic	BP3Z	250mL NaOH, Zn Ac plastic	BP3Z	250mL NaOH, Zn Ac plastic	BP3Z	40mL unpreserved clear vial
BP3S	250mL H2SO4 plastic	BP1S	1 liter H2SO4 clear glass	C	Air Cassette	C	Air Cassette	C	Air Cassette	C	Air Cassette	C	Headspace septa vial & HCL
AG3S	250mL H2SO4 glass amber	BP1T	1 liter Na Thiosulfate clear gla	DG9B	40mL Na Bisulfate amber vial	DG9B	40mL Na Bisulfate amber vial	DG9B	40mL Na Bisulfate amber vial	DG9B	40mL Na Bisulfate amber vial	DG9B	WGFX 4oz wide jar whexane wipe
AG1S	1 liter H2SO4 amber glass	BP1U	1 liter unpreserved glass	DG9M	40mL MeOH clear vial	DG9M	40mL MeOH clear vial	DG9M	40mL MeOH clear vial	DG9M	40mL MeOH clear vial	DG9M	ZPLC Ziploc Bag
BP1U	1 liter unpreserved plastic	BP1A	1 liter NaOH, Asc Acid plastic										

CLIENT: Mundell & Assoc.

COC PAGE 2 of 2  
COC ID# 1320222

Project # 5031839

Sample Line	DG9H	AG1U	WGFU	R	4 / 6	BP2N	BP2U	BP2S	BP3N	BP3U	BP3S	AG3S	AG1H	Comments
1	3													
2	3													
3	3													
4	3													
5	3													
6														
7														
8														
9														
10														
11														
12														

• Container Codes

DG9H	40mL HCl amber vial	AF	Air Filter	BP1N	1 liter HNO3 plastic	BP1S	1 liter H2SO4 plastic	BP1U	1 liter HCl amber glass	BP1T	1 liter H2SO4 amber glass	BP2A	500mL NaOH, Asc Acid plastic	DG9P	40mL TSP amber vial
AG1U	1 liter unpreserved amber glass	AG1H	1 liter HCl amber glass	BP1S	1 liter H2SO4 plastic	BP1S	1 liter H2SO4 plastic	BP1U	1 liter unpreserved plastic	BP1U	1 liter H2SO4 amber glass	BP1U	1 liter unpreserved plastic	DG9S	40mL H2SO4 amber vial
WGFU	4oz clear soil jar	AG1S	1 liter H2SO4 amber glass	BP1U	1 liter unpreserved plastic	BP1U	1 liter H2SO4 amber glass	BP1U	1 liter Na Thiosulfate amber gl	BP1Z	1 liter NaOH, Zn, Ac	BP1Z	1 liter Na Thiosulfate amber gl	DG9T	40mL Na Thio amber vial
R	terra core kit	AG1T	1 liter Na Thiosulfate amber gl	BP1Z	1 liter NaOH, Zn, Ac	BP1Z	1 liter NaOH, Zn, Ac	BP1Z	500mL HNO3 amber glass	BP2A	500mL NaOH, Asc Acid plastic	BP2A	500mL NaOH, Asc Acid plastic	DG9U	40mL unpreserved amber vial
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2O	500mL NaOH plastic	BP2O	500mL NaOH plastic	BP2O	500mL H2SO4 amber glass	BP2U	500mL NaOH, Zn Ac	BP2U	500mL NaOH, Zn Ac	JGFU	4oz unpreserved amber wide
BP2U	500mL unpreserved plastic	AG2S	500mL H2SO4 amber glass	BP2U	500mL NaOH, Zn Ac	BP2U	500mL NaOH, Zn Ac	BP2U	500mL unpreserved amber gla	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	JGFU	4oz unpreserved amber wide
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber gla	BP2S	500mL NaOH, Zn Ac	BP2S	500mL NaOH, Zn Ac	BP2S	250mL unpreserved amber gla	BP3A	250mL NaOH, Asc Acid plastic	BP3A	250mL NaOH, Asc Acid plastic	VG9H	40mL HCl, clear vial
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber gla	BP3A	250mL NaOH, Asc Acid plastic	BP3A	250mL NaOH, Asc Acid plastic	BP3A	250mL H2SO4 amber	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	VG9T	40mL Na Thio, clear vial
BP3U	250mL unpreserved plastic	BP1H	1 liter HCl clear glass	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	1 liter H2SO4 clear glass	BP3S	250mL NaOH, Zn Ac plastic	BP3S	250mL NaOH, Zn Ac plastic	VG9U	40mL unpreserved clear vial
BP3S	250mL H2SO4 plastic	BP1S	1 liter H2SO4 clear glass	BP3S	250mL NaOH, Zn Ac plastic	BP3S	250mL NaOH, Zn Ac plastic	BP3S	1 liter Na Thiosulfate clear gla	C	Air Cassettes	C	Air Cassettes	VSG	Headspace septa vial & HCl
AG3S	250mL H2SO4 glass amber	BP1T	1 liter Na Thiosulfate amber	BP1T	1 liter Na Thiosulfate amber	BP1T	1 liter Na Thiosulfate amber	BP1T	1 liter unpreserved glass	BG1U	1 liter Bisulfite amber vial	DG9B	40mL Na Bisulfate amber vial	WGFX	4oz wide jar w/hexane wipe
AG1S	1 liter H2SO4 amber glass	BG1U	1 liter unpreserved glass	BG1U	1 liter Bisulfite amber vial	BG1U	1 liter Bisulfite amber vial	BG1U	1 liter NaOH, Asc Acid plastic	BP1A	40mL MeOH clear vial	DG9M	40mL MeOH clear vial	ZPLC	Ziploc Bag
BP1U	1 liter unpreserved plastic	BP1A	1 liter NaOH, Asc Acid plastic	BP1A	1 liter NaOH, Asc Acid plastic	BP1A	1 liter NaOH, Asc Acid plastic	BP1A	1 liter unpreserved plastic						

November 10, 2009

Ms. Leena Lothe  
Mundell & Associates, Inc.  
110 South Downey Avenue  
Indianapolis, IN 46219

RE: Project: MI Plaza M01046  
Pace Project No.: 5031891

Dear Ms. Lothe:

Enclosed are the analytical results for sample(s) received by the laboratory on November 05, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Tina Sayer

tina.sayer@pacelabs.com  
Project Manager

Illinois/NELAC Certification #: 100418  
Indiana Certification #: C-49-06  
Kansas Certification #: E-10247  
Kentucky Certification #: 0042  
Ohio VAP: CL0065  
Pennsylvania: 68-00791  
West Virginia Certification #: 330

Enclosures

#### REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: MI Plaza M01046

Pace Project No.: 5031891

Lab ID	Sample ID	Matrix	Date Collected	Date Received
5031891001	MW-168D	Water	11/04/09 11:52	11/05/09 13:48
5031891002	MMW-P-04	Water	11/05/09 13:00	11/05/09 13:48
5031891003	Trip Blank	Water	11/04/09 08:00	11/05/09 13:48

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: MI Plaza M01046  
 Pace Project No.: 5031891

Lab ID	Sample ID	Method	Analysts	Analytes Reported
5031891001	MW-168D	ASTM D516-90,02	TPD	1
		EPA 353.2	ILP	1
		EPA 8260	SLB	18
5031891002	MMW-P-04	EPA 8260	SLB	18
5031891003	Trip Blank	EPA 8260	SLB	18

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza M01046

Pace Project No.: 5031891

Sample: MW-168D	Lab ID: 5031891001	Collected: 11/04/09 11:52	Received: 11/05/09 13:48	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/09/09 12:47	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/09/09 12:47	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/09/09 12:47	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/09/09 12:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		11/09/09 12:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/09/09 12:47	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/09/09 12:47	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/09/09 12:47	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/09/09 12:47	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/09/09 12:47	127-18-4	
Toluene	ND	ug/L	5.0	1		11/09/09 12:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/09/09 12:47	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/09/09 12:47	79-01-6	
Vinyl chloride	99.1	ug/L	2.0	1		11/09/09 12:47	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/09/09 12:47	1330-20-7	
Dibromofluoromethane (S)	102 %		80-123	1		11/09/09 12:47	1868-53-7	
4-Bromofluorobenzene (S)	98 %		70-126	1		11/09/09 12:47	460-00-4	
Toluene-d8 (S)	95 %		80-116	1		11/09/09 12:47	2037-26-5	
<b>353.2 Nitrogen, NO<sub>2</sub>/NO<sub>3</sub> unpres</b>	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	1		11/06/09 11:03		
<b>ASTM D516-9002 Sulfate Water</b>	Analytical Method: ASTM D516-90,02							
Sulfate	59.4	mg/L	25.0	1		11/09/09 14:18	14808-79-8	

Date: 11/10/2009 12:57 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza M01046

Pace Project No.: 5031891

Sample: MMW-P-04	Lab ID: 5031891002	Collected: 11/05/09 13:00	Received: 11/05/09 13:48	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/09/09 13:17	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/09/09 13:17	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/09/09 13:17	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/09/09 13:17	75-35-4	
cis-1,2-Dichloroethene	<b>1190</b>	ug/L	125	25		11/09/09 13:46	156-59-2	
trans-1,2-Dichloroethene	<b>36.9</b>	ug/L	5.0	1		11/09/09 13:17	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/09/09 13:17	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/09/09 13:17	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/09/09 13:17	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/09/09 13:17	127-18-4	
Toluene	ND	ug/L	5.0	1		11/09/09 13:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/09/09 13:17	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/09/09 13:17	79-01-6	
Vinyl chloride	<b>90.9</b>	ug/L	2.0	1		11/09/09 13:17	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/09/09 13:17	1330-20-7	
Dibromofluoromethane (S)	99 %		80-123	1		11/09/09 13:17	1868-53-7	
4-Bromofluorobenzene (S)	98 %		70-126	1		11/09/09 13:17	460-00-4	
Toluene-d8 (S)	97 %		80-116	1		11/09/09 13:17	2037-26-5	

Date: 11/10/2009 12:57 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: MI Plaza M01046

Pace Project No.: 5031891

Sample: Trip Blank	Lab ID: 5031891003	Collected: 11/04/09 08:00	Received: 11/05/09 13:48	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1		11/09/09 14:16	71-43-2	
Carbon tetrachloride	ND	ug/L	5.0	1		11/09/09 14:16	56-23-5	
Chloroform	ND	ug/L	5.0	1		11/09/09 14:16	67-66-3	
1,1-Dichloroethene	ND	ug/L	5.0	1		11/09/09 14:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		11/09/09 14:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		11/09/09 14:16	156-60-5	
Ethylbenzene	ND	ug/L	5.0	1		11/09/09 14:16	100-41-4	
Methylene chloride	ND	ug/L	5.0	1		11/09/09 14:16	75-09-2	
Naphthalene	ND	ug/L	5.0	1		11/09/09 14:16	91-20-3	
Tetrachloroethene	ND	ug/L	5.0	1		11/09/09 14:16	127-18-4	
Toluene	ND	ug/L	5.0	1		11/09/09 14:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		11/09/09 14:16	71-55-6	
Trichloroethene	ND	ug/L	5.0	1		11/09/09 14:16	79-01-6	
Vinyl chloride	ND	ug/L	2.0	1		11/09/09 14:16	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		11/09/09 14:16	1330-20-7	
Dibromofluoromethane (S)	102 %		80-123	1		11/09/09 14:16	1868-53-7	
4-Bromofluorobenzene (S)	100 %		70-126	1		11/09/09 14:16	460-00-4	
Toluene-d8 (S)	98 %		80-116	1		11/09/09 14:16	2037-26-5	

Date: 11/10/2009 12:57 PM

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: MI Plaza M01046

Pace Project No.: 5031891

QC Batch: WETA/4345 Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.

Associated Lab Samples: 5031891001

METHOD BLANK: 364219 Matrix: Water

Associated Lab Samples: 5031891001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	11/06/09 11:01	

LABORATORY CONTROL SAMPLE: 364220

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	0.91	91	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 364221 364222

Parameter	Units	5031891001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Max Qual
Nitrogen, Nitrate	mg/L	ND	1	1	0.91	0.91	87	88	90-110	.7	20	M3

## QUALITY CONTROL DATA

Project: MI Plaza M01046

Pace Project No.: 5031891

QC Batch: WETA/4353 Analysis Method: ASTM D516-90,02

QC Batch Method: ASTM D516-90,02 Analysis Description: ASTM D516-9002 Sulfate Water

Associated Lab Samples: 5031891001

METHOD BLANK: 365024 Matrix: Water

Associated Lab Samples: 5031891001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	5.0	11/09/09 14:18	

LABORATORY CONTROL SAMPLE: 365025

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	21.7	108	90-110	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 365026 365027

Parameter	Units	5031490011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Sulfate	mg/L	2820	2000	2000	5100	5010	114	109	75-125	2	20	

Date: 11/10/2009 12:57 PM

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: MI Plaza M01046

Pace Project No.: 5031891

QC Batch:	MSV/19803	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	5031891001, 5031891002, 5031891003		

METHOD BLANK: 365365   Matrix: Water

Associated Lab Samples: 5031891001, 5031891002, 5031891003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	11/09/09 09:50	
1,1-Dichloroethene	ug/L	ND	5.0	11/09/09 09:50	
Benzene	ug/L	ND	5.0	11/09/09 09:50	
Carbon tetrachloride	ug/L	ND	5.0	11/09/09 09:50	
Chloroform	ug/L	ND	5.0	11/09/09 09:50	
cis-1,2-Dichloroethene	ug/L	ND	5.0	11/09/09 09:50	
Ethylbenzene	ug/L	ND	5.0	11/09/09 09:50	
Methylene chloride	ug/L	ND	5.0	11/09/09 09:50	
Naphthalene	ug/L	ND	5.0	11/09/09 09:50	
Tetrachloroethene	ug/L	ND	5.0	11/09/09 09:50	
Toluene	ug/L	ND	5.0	11/09/09 09:50	
trans-1,2-Dichloroethene	ug/L	ND	5.0	11/09/09 09:50	
Trichloroethene	ug/L	ND	5.0	11/09/09 09:50	
Vinyl chloride	ug/L	ND	2.0	11/09/09 09:50	
Xylene (Total)	ug/L	ND	10.0	11/09/09 09:50	
4-Bromofluorobenzene (S)	%	97	70-126	11/09/09 09:50	
Dibromofluoromethane (S)	%	99	80-123	11/09/09 09:50	
Toluene-d8 (S)	%	96	80-116	11/09/09 09:50	

LABORATORY CONTROL SAMPLE: 365366

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	52.7	105	69-136	
1,1-Dichloroethene	ug/L	50	50.0	100	63-128	
Benzene	ug/L	50	47.4	95	78-127	
Carbon tetrachloride	ug/L	50	52.4	105	62-143	
Chloroform	ug/L	50	48.5	97	74-131	
cis-1,2-Dichloroethene	ug/L	50	47.4	95	74-128	
Ethylbenzene	ug/L	50	46.0	92	81-126	
Methylene chloride	ug/L	50	45.4	91	32-164	
Naphthalene	ug/L	50	46.5	93	61-135	
Tetrachloroethene	ug/L	50	44.2	88	60-119	
Toluene	ug/L	50	45.7	91	75-129	
trans-1,2-Dichloroethene	ug/L	50	51.4	103	71-126	
Trichloroethene	ug/L	50	47.8	96	74-130	
Vinyl chloride	ug/L	50	44.3	89	55-141	
Xylene (Total)	ug/L	150	137	92	76-132	
4-Bromofluorobenzene (S)	%			99	70-126	
Dibromofluoromethane (S)	%			102	80-123	
Toluene-d8 (S)	%			97	80-116	

Date: 11/10/2009 12:57 PM

## REPORT OF LABORATORY ANALYSIS

Page 9 of 10

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without the written consent of Pace Analytical Services, Inc..



## QUALIFIERS

Project: MI Plaza M01046  
Pace Project No.: 5031891

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

### ANALYTE QUALIFIERS

M3      Matrix spike recovery was outside laboratory control limits due to matrix interferences.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

F-ALL-Q-020rev.07, 15-May-2007

**\*Important Note:** By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

## Sample Condition Upon Receipt

Pace Analytical

Client Name: Mundell &amp; Associates Project #

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: \_\_\_\_\_

Optional	Proj. Due Date:
	Proj. Name:

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  noPacking Material:  Bubble Wrap  Bubble Bags  None  Other *foam*Thermometer Used *123456*Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begunCooler Temperature *3.8°C*Biological Tissue Is Frozen: Yes  No *circle*Date and Initials of person examining contents: *11/05/09 m*

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <i>mivate 353.2 BO</i>
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <i>on chain MW-P-04D on container MW-P-04 BO</i>
-Includes date/time/ID/Analysis Matrix: <i>water</i>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed      Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

## Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: *Leena Lothe* Date/Time: *11-9-09 via phone*

## Comments/ Resolution:

*Analyze Trip blank and change sample ID to MW-P-04*Project Manager Review: *J. Sayer*Date: *11/9/09*

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)

CLIENT: Mundell & Assoc.

Sample Container Form

Space Analytical  
by J. R. Greenleaf

COC PAGE 1 of 1  
COC ID# 1320216

Project # 503|89|

Container Codes

• Container Codes							
DG9H	40mL HCl amber vial	AF	Air Filter	BP1N	1 liter HNO3 plastic	DG9P	40mL TSP amber vial
AG1U	1liter unpreserved amber glass	AG1H	1 liter HCl amber glass	BP1S	1 liter H2SO4 plastic	DG9S	40mL H2SO4 amber vial
WGFL	4oz clear soil jar	AG1S	1 liter H2SO4 amber glass	BP1U	1 liter unpreserved plastic	DG9T	40mL Na Thio amber vial
R	terra core kit	AG1T	1 liter Na Thiosulfate amber gl	BP1Z	1 liter NaOH, Zn, Ac	DG9U	40mL unpreserved amber vial
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2A	500mL NaOH, Asc Acid plastic	I	Wipe/Swab
BP2U	500mL unpreserved plastic	AG2S	500mL H2SO4 amber glass	BP2O	500mL NaOH plastic	JGFU	4oz unpreserved amber wide
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber gla	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber gla	BP3A	250mL NaOH, Asc Acid plastic	VGH	40mL HCL clear vial
BP3U	250mL unpreserved plastic	BG1H	1 liter HCl clear glass	BP3C	250mL NaOH plastic	VG9T	40mL Na Thio, clear vial
BP3S	250mL H2SO4 plastic	BG1S	1 liter H2SO4 clear glass	BP3Z	250mL NaOH, Zn Ac plastic	VG9U	40mL unpreserved clear vial
AG3S	250mL H2SO4 glass amber	BG1T	1 liter Na Thiosulfate clear gla	C	Air Cassettes	VSG	Headspace septa vial & HCL
AG1S	1 liter H2SO4 amber glass	BG1U	1 liter unpreserved glass	DG9B	40mL Na Bisulfite amber vial	WGFX	4oz wide jar w/hexane wipe
BP1U	1 liter unpreserved plastic	BP1A	1 liter NaOH, Asc Acid plastic	DG9M	40mL MeOH clear vial	ZPLC	Ziploc Bag



January 26, 2010

Ms. Leena Lothe  
Mundell & Associates  
110 South Downey Avenue  
Indianapolis, IN 46219

Dear Ms. Lothe,

In response to your inquiry regarding our reporting limit of vinyl chloride; we establish our PQL (practical quantitation limit) on our ability to accurately report a result. Because vinyl chloride is such a light compound and minimally retained, we feel comfortable with a reporting limit of 1 PPMV. At 1 PPMV we get good separation of the peaks and are confident that the result we report is accurate.

Sincerely,

Debbie Hallo  
Manager of Customer Service



Client Name: Mundell & Associates  
Contact: Leena Lothe  
Address: 110 South Downey Avenue  
Indianapolis, IN 46219

Page: Page 1 of 8  
Lab Proj #: P0911158  
Report Date: 11/20/09  
Client Proj Name: Michigan Plaza  
Client Proj #: M01046

### Laboratory Results

Total pages in data package: 8

<u>Lab Sample #</u>	<u>Client Sample ID</u>
P0911158-01	B-1
P0911158-02	B-2
P0911158-03	B-3
P0911158-04	B-4
P0911158-05	B-5
P0911158-06	B-6
P0911158-07	B-7

Microseeps test results meet all the requirements of the NELAC standards or provide reasons and/or justification if they do not.

Approved By: Debbie Hallo

Date: 1-26-10

Project Manager: Debbie Hallo

The analytical results reported here are reliable and usable to the precision expressed in this report. As required by some regulating authorities, a full discussion of the uncertainty in our analytical results can be obtained at our web site or through customer service. Unless otherwise specified, all results are reported on a wet weight basis.

*As a valued client we would appreciate your comments on our service.*

*Please call customer service at (412)826-5245 or email [customerservice@microseeps.com](mailto:customerservice@microseeps.com).*

Case Narrative: This report is being reissued on 1/26/2010 to include laboratory data flags.

Client Name: Mundell & Associates  
 Contact: Leena Lothe  
 Address: 110 South Downey Avenue  
 Indianapolis, IN 46219

Page: Page 2 of 8  
 Lab Proj #: P0911158  
 Report Date: 11/20/09  
 Client Proj Name: Michigan Plaza  
 Client Proj #: M01046

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>		<u>Sampled Date/Time</u>		<u>Received</u>	
B-1	Vapor	P0911158-01		05 Nov. 09 11:40		10 Nov. 09 13:26	
<u>Analyte(s)</u>	<u>Flag Result</u>	<u>PQL</u>	<u>MDL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>	<u>By</u>
<b>Risk Analysis</b>							
N 1,1,1-Trichloroethane	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09 mm
N 1,1-Dichloroethane	U	< 0.0200	0.0200	0.0057	PPMV	AM4.02	11/17/09 mm
N 1,1-Dichloroethene	U	< 0.0100	0.0100	0.0011	PPMV	AM4.02	11/17/09 mm
N Carbon Tetrachloride	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09 mm
N Chloroform	J	0.0026	0.0050	0.0005	PPMV	AM4.02	11/17/09 mm
N cis-1,2-Dichloroethene	J	0.0072	0.0200	0.0065	PPMV	AM4.02	11/17/09 mm
N Methylene Chloride	U	< 2.0000	2.0000	0.1500	PPMV	AM4.02	11/17/09 mm
N Tetrachloroethene		0.3300	0.0100	0.0006	PPMV	AM4.02	11/17/09 mm
N trans-1,2-Dichloroethene	U	< 0.0100	0.0100	0.0039	PPMV	AM4.02	11/17/09 mm
N Trichloroethene	J	0.0028	0.0100	0.0008	PPMV	AM4.02	11/17/09 mm
N Vinyl Chloride	J	0.1600	1.0000	0.0400	PPMV	AM4.02	11/17/09 mm



Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Mundell & Associates  
Contact: Leena Lothe  
Address: 110 South Downey Avenue  
Indianapolis, IN 46219

Page: Page 3 of 8  
Lab Proj #: P0911158  
Report Date: 11/20/09  
Client Proj Name: Michigan Plaza  
Client Proj #: M01046

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>		<u>Sampled Date/Time</u>		<u>Received</u>		
B-2	Vapor	P0911158-02		05 Nov. 09 11:26		10 Nov. 09 13:26		
<u>Analyte(s)</u>	<u>Flag Result</u>	<u>PQL</u>	<u>MDL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>		
<u>Risk Analysis</u>								
N 1,1,1-Trichloroethane	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09	mm
N 1,1-Dichloroethane	U	< 0.0200	0.0200	0.0057	PPMV	AM4.02	11/17/09	mm
N 1,1-Dichloroethene	U	< 0.0100	0.0100	0.0011	PPMV	AM4.02	11/17/09	mm
N Carbon Tetrachloride	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09	mm
N Chloroform	J	0.0011	0.0050	0.0005	PPMV	AM4.02	11/17/09	mm
N cis-1,2-Dichloroethene	U	< 0.0200	0.0200	0.0065	PPMV	AM4.02	11/17/09	mm
N Methylene Chloride	U	< 2.0000	2.0000	0.1500	PPMV	AM4.02	11/17/09	mm
N Tetrachloroethene		0.1400	0.0100	0.0006	PPMV	AM4.02	11/17/09	mm
N trans-1,2-Dichloroethene	U	< 0.0100	0.0100	0.0039	PPMV	AM4.02	11/17/09	mm
N Trichloroethene	J	0.0028	0.0100	0.0008	PPMV	AM4.02	11/17/09	mm
N Vinyl Chloride	J	0.1500	1.0000	0.0400	PPMV	AM4.02	11/17/09	mm



Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Mundell & Associates  
 Contact: Leena Lothe  
 Address: 110 South Downey Avenue  
 Indianapolis, IN 46219

Page: Page 4 of 8  
 Lab Proj #: P0911158  
 Report Date: 11/20/09  
 Client Proj Name: Michigan Plaza  
 Client Proj #: M01046

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>		<u>Sampled Date/Time</u>		<u>Received</u>	
B-3	Vapor	P0911158-03		05 Nov. 09 11:15		10 Nov. 09 13:26	
<u>Analyte(s)</u>	<u>Flag Result</u>	PQL	MDL	Units	Method #	<u>Analysis Date</u>	<u>By</u>
<b>RiskAnalysis</b>							
N 1,1,1-Trichloroethane	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09 mm
N 1,1-Dichloroethane	U	< 0.0200	0.0200	0.0057	PPMV	AM4.02	11/17/09 mm
N 1,1-Dichloroethene	U	< 0.0100	0.0100	0.0011	PPMV	AM4.02	11/17/09 mm
N Carbon Tetrachloride	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09 mm
N Chloroform	J	0.0019	0.0050	0.0005	PPMV	AM4.02	11/17/09 mm
N cis-1,2-Dichloroethene	U	< 0.0200	0.0200	0.0065	PPMV	AM4.02	11/17/09 mm
N Methylene Chloride	U	< 2.0000	2.0000	0.1500	PPMV	AM4.02	11/17/09 mm
N Tetrachloroethene		0.4100	0.0100	0.0006	PPMV	AM4.02	11/17/09 mm
N trans-1,2-Dichloroethene	U	< 0.0100	0.0100	0.0039	PPMV	AM4.02	11/17/09 mm
N Trichloroethene	J	0.0020	0.0100	0.0008	PPMV	AM4.02	11/17/09 mm
N Vinyl Chloride	J	0.1400	1.0000	0.0400	PPMV	AM4.02	11/17/09 mm



Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Mundell & Associates  
 Contact: Leena Lothe  
 Address: 110 South Downey Avenue  
 Indianapolis, IN 46219

Page: Page 5 of 8  
 Lab Proj #: P0911158  
 Report Date: 11/20/09  
 Client Proj Name: Michigan Plaza  
 Client Proj #: M01046

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>		<u>Sampled Date/Time</u>		<u>Received</u>	
B-4	Vapor	P0911158-04		06 Nov. 09 11:40		10 Nov. 09 13:26	
<u>Analyte(s)</u>	<u>Flag Result</u>	<u>PQL</u>	<u>MDL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>	<u>By</u>
<b>RiskAnalysis</b>							
N 1,1,1-Trichloroethane	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09
N 1,1-Dichloroethane	U	< 0.0200	0.0200	0.0057	PPMV	AM4.02	11/17/09
N 1,1-Dichloroethene	U	< 0.0100	0.0100	0.0011	PPMV	AM4.02	11/17/09
N Carbon Tetrachloride	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09
N Chloroform		0.0056	0.0050	0.0005	PPMV	AM4.02	11/17/09
N cis-1,2-Dichloroethene	U	< 0.0200	0.0200	0.0065	PPMV	AM4.02	11/17/09
N Methylene Chloride	U	< 2.0000	2.0000	0.1500	PPMV	AM4.02	11/17/09
N Tetrachloroethene	U	< 0.0100	0.0100	0.0006	PPMV	AM4.02	11/17/09
N trans-1,2-Dichloroethene	U	< 0.0100	0.0100	0.0039	PPMV	AM4.02	11/17/09
N Trichloroethene	U	< 0.0100	0.0100	0.0008	PPMV	AM4.02	11/17/09
N Vinyl Chloride	J	0.1200	1.0000	0.0400	PPMV	AM4.02	11/17/09



Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Mundell & Associates  
 Contact: Leena Lothe  
 Address: 110 South Downey Avenue  
 Indianapolis, IN 46219

Page: Page 6 of 8  
 Lab Proj #: P0911158  
 Report Date: 11/20/09  
 Client Proj Name: Michigan Plaza  
 Client Proj #: M01046

Sample Description	Matrix	Lab Sample #		Sampled Date/Time		Received	
		Vapor	P0911158-05	05 Nov. 09	10:27	10 Nov. 09	13:26
Analyte(s)	Flag Result	PQL	MDL	Units	Method #	Analysis Date	By
<b>Risk Analysis</b>							
N 1,1,1-Trichloroethane	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09 mm
N 1,1-Dichloroethane	U	< 0.0200	0.0200	0.0057	PPMV	AM4.02	11/17/09 mm
N 1,1-Dichloroethene	U	< 0.0100	0.0100	0.0011	PPMV	AM4.02	11/17/09 mm
N Carbon Tetrachloride	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09 mm
N Chloroform	U	< 0.0050	0.0050	0.0005	PPMV	AM4.02	11/17/09 mm
N cis-1,2-Dichloroethene	U	< 0.0200	0.0200	0.0065	PPMV	AM4.02	11/17/09 mm
N Methylene Chloride	U	< 2.0000	2.0000	0.1500	PPMV	AM4.02	11/17/09 mm
N Tetrachloroethene		0.1300	0.0100	0.0006	PPMV	AM4.02	11/17/09 mm
N trans-1,2-Dichloroethene	U	< 0.0100	0.0100	0.0039	PPMV	AM4.02	11/17/09 mm
N Trichloroethene	J	0.0043	0.0100	0.0008	PPMV	AM4.02	11/17/09 mm
N Vinyl Chloride	J	0.1200	1.0000	0.0400	PPMV	AM4.02	11/17/09 mm



Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Mundell & Associates  
 Contact: Leena Lothe  
 Address: 110 South Downey Avenue  
 Indianapolis, IN 46219

Page: Page 7 of 8  
 Lab Proj #: P0911158  
 Report Date: 11/20/09  
 Client Proj Name: Michigan Plaza  
 Client Proj #: M01046

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>		<u>Sampled Date/Time</u>		<u>Received</u>	
B-6	Vapor	P0911158-06		05 Nov. 09 10:46		10 Nov. 09 13:26	
<u>Analyte(s)</u>	<u>Flag Result</u>	<u>PQL</u>	<u>MDL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>	<u>By</u>
<b>RiskAnalysis</b>							
N 1,1,1-Trichloroethane	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09 mm
N 1,1-Dichloroethane	U	< 0.0200	0.0200	0.0057	PPMV	AM4.02	11/17/09 mm
N 1,1-Dichloroethene	U	< 0.0100	0.0100	0.0011	PPMV	AM4.02	11/17/09 mm
N Carbon Tetrachloride	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09 mm
N Chloroform	U	< 0.0050	0.0050	0.0005	PPMV	AM4.02	11/17/09 mm
N cis-1,2-Dichloroethene	U	< 0.0200	0.0200	0.0065	PPMV	AM4.02	11/17/09 mm
N Methylene Chloride	U	< 2.0000	2.0000	0.1500	PPMV	AM4.02	11/17/09 mm
N Tetrachloroethene		0.1100	0.0100	0.0006	PPMV	AM4.02	11/17/09 mm
N trans-1,2-Dichloroethene	U	< 0.0100	0.0100	0.0039	PPMV	AM4.02	11/17/09 mm
N Trichloroethene	J	0.0011	0.0100	0.0008	PPMV	AM4.02	11/17/09 mm
N Vinyl Chloride	U	< 1.0000	1.0000	0.0400	PPMV	AM4.02	11/17/09 mm



Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Mundell & Associates  
Contact: Leena Lothe  
Address: 110 South Downey Avenue  
Indianapolis, IN 46219

Page: Page 8 of 8  
Lab Proj #: P0911158  
Report Date: 11/20/09  
Client Proj Name: Michigan Plaza  
Client Proj #: M01046

Sample Description	Matrix	Lab Sample #		Sampled Date/Time		Received	
		Vapor	P0911158-07	05 Nov. 09	11:05	10 Nov. 09	13:26
Analyte(s)	Flag Result	PQL	MDL	Units	Method #	Analysis Date	By
<b>Risk Analysis</b>							
N 1,1,1-Trichloroethane	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09
N 1,1-Dichloroethane	U	< 0.0200	0.0200	0.0057	PPMV	AM4.02	11/17/09
N 1,1-Dichloroethene	U	< 0.0100	0.0100	0.0011	PPMV	AM4.02	11/17/09
N Carbon Tetrachloride	U	< 0.0050	0.0050	0.0004	PPMV	AM4.02	11/17/09
N Chloroform	U	< 0.0050	0.0050	0.0005	PPMV	AM4.02	11/17/09
N cis-1,2-Dichloroethene	U	< 0.0200	0.0200	0.0065	PPMV	AM4.02	11/17/09
N Methylene Chloride	U	< 2.0000	2.0000	0.1500	PPMV	AM4.02	11/17/09
N Tetrachloroethene	U	< 0.0100	0.0100	0.0006	PPMV	AM4.02	11/17/09
N trans-1,2-Dichloroethene	U	< 0.0100	0.0100	0.0039	PPMV	AM4.02	11/17/09
N Trichloroethene	U	< 0.0100	0.0100	0.0008	PPMV	AM4.02	11/17/09
N Vinyl Chloride	U	< 1.0000	1.0000	0.0400	PPMV	AM4.02	11/17/09



Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

## **APPENDIX B**

### **Air Mitigation Systems: Pounds of Contaminants Removed**

Air Mitigation System - Historical Air Analytical Results													
Sample Date	Michigan Plaza Indianapolis, Indiana MUNDELL Project No.: M01046												
	Perchloroethylene (PCE)												
	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4	
	(ppmv)				(ppm)				( $\mu\text{g}/\text{m}^3$ )				
9/21/2006	0.6300	0.7900	0.6700	0.2800	0.0043	0.0054	0.0046	0.0019	4281.48	5368.84	4553.32	1902.88	
10/6/2006	0.8800	0.6700	0.9700	0.3100	0.0060	0.0046	0.0066	0.0021	5980.48	4553.32	6592.12	2106.76	
10/13/2006	0.6800	0.3600	0.5200	0.2100	0.0046	0.0024	0.0035	0.0014	4621.28	2446.56	3533.92	1427.16	
10/20/2006	0.8700	0.5500	0.8900	0.2200	0.0059	0.0037	0.0060	0.0015	5912.52	3737.80	6048.44	1495.12	
11/17/2006	0.8100	0.4700	0.7800	0.1500	0.0055	0.0032	0.0053	0.0010	5504.76	3194.12	5300.88	1019.40	
12/27/2006	0.7400	0.4700	0.7500	0.1100	0.0050	0.0032	0.0051	0.0007	5029.04	3194.12	5097.00	747.56	
3/30/2007	0.5100	0.1800	0.5700	0.0310	0.0035	0.0012	0.0039	0.0002	3465.96	1223.28	3873.72	210.68	
6/15/2007	0.0050	0.3100	0.2100	0.4600	0.0000	0.0021	0.0014	0.0031	33.98	2106.76	1427.16	3126.16	
10/16/2007	0.3900	0.2400	0.2800	0.0670	0.0027	0.0016	0.0019	0.0005	2650.44	1631.04	1902.88	455.33	
12/14/2007	0.5800	0.3400	0.5200	0.1400	0.0039	0.0023	0.0035	0.0010	3941.68	2310.64	3533.92	951.44	
3/27/2008	0.5500	NS	0.5600	0.0740	0.0037	NS	0.0038	0.0005	3737.80	NS	3805.76	502.90	
4/1/2008	NS	0.3600	NS	NS	NS	0.0024	NS	NS	NS	2446.56	NS	NS	
6/2/2008	0.7200	0.5600	0.4900	0.1000	0.0049	0.0038	0.0033	0.0007	4893.12	3805.76	3330.04	679.60	
9/12/2008	0.4800	0.4700	0.5300	0.1300	0.0033	0.0032	0.0036	0.0009	3262.08	3194.12	3601.88	883.48	
11/26/2008	0.4600	NS	0.3600	0.1100	0.0031	NS	0.0024	0.0007	3126.16	NS	2446.56	747.56	
3/24/2009	0.4500	NS	0.5500	0.0050	0.0031	NS	0.0037	0.0000	3058.20	NS	3737.80	33.98	
6/15/2009	0.4300	NS	0.4200	0.0200	0.0029	NS	0.0029	0.0001	2922.28	NS	2854.32	135.92	
8/21/2009	0.3600	0.1600	0.4700	0.0140	0.0024	0.0011	0.0032	0.0001	2446.56	1087.36	3194.12	95.14	
11/5/2009	0.3300	0.1400	0.4100	0.0050	0.0022	0.0010	0.0028	0.0000	2242.68	951.44	2786.36	33.98	

NS = Not sampled

*Italic* = Reported values are below laboratory detection limits.

Concentrations of PCE, TCE, and cis-1,2-Dichloroethylene assumed at 1/2 reported detection limit. Concentrations of vinyl chloride assumed at 0.15ppmv, the mean detected concentration below reporting limits.

**Air Mitigation - Historical Air Analytical Results**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Project No.: M01046**

Sample Date	Trichloroethylene (TCE)											
	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4
	(ppmv)				(ppm)				( $\mu\text{g}/\text{m}^3$ )			
9/21/2006	0.0240	0.0120	0.0050	0.0050	0.0001	0.0001	0.0000	0.0000	129.24	64.62	26.93	26.93
10/6/2006	0.0120	0.0050	0.0050	0.0050	0.0001	0.0000	0.0000	0.0000	64.62	26.93	26.93	26.93
10/13/2006	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	0.0000	26.93	26.93	26.93	26.93
10/20/2006	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	0.0000	26.93	26.93	26.93	26.93
11/17/2006	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	0.0000	26.93	26.93	26.93	26.93
12/27/2006	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	0.0000	26.93	26.93	26.93	26.93
3/30/2007	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	0.0000	26.93	26.93	26.93	26.93
6/15/2007	0.4600	0.0050	0.0050	0.0050	0.0025	0.0000	0.0000	0.0000	2,477.10	26.93	26.93	26.93
10/16/2007	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	0.0000	26.93	26.93	26.93	26.93
12/14/2007	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	0.0000	26.93	26.93	26.93	26.93
3/27/2008	0.0050	NS	0.0050	0.0050	0.0000	NS	0.0000	0.0000	26.93	NS	26.93	26.93
4/1/2008	NS	0.0050	NS	NS	NS	0.0000	NS	NS	NS	26.93	NS	NS
6/2/2008	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	0.0000	26.93	26.93	26.93	26.93
9/12/2008	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	0.0000	26.93	26.93	26.93	26.93
11/26/2008	0.0050	NS	0.0050	0.0050	0.0000	NS	0.0000	0.0000	26.93	NS	26.93	26.93
3/24/2009	0.0050	NS	0.0050	0.0050	0.0000	NS	0.0000	0.0000	26.93	NS	26.93	26.93
6/15/2009	0.0050	NS	0.0050	0.0050	0.0000	NS	0.0000	0.0000	26.93	NS	26.93	26.93
8/31/2009	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	0.0000	26.93	26.93	26.93	26.93
11/5/2009	0.0050	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	0.0000	26.93	26.93	26.93	26.93

NS = Not sampled

*Italic* = Reported values are below laboratory detection limits.

Concentrations of PCE, TCE, and cis-1,2-Dichloroethylene assumed at 1/2 reported detection limit. Concentrations of vinyl chloride assumed at 0.15ppmv, the mean detected concentration below reporting limits.

**Air Mitigation - Historical Air Analytical Results**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Project No.: M01046**

Sample Date	Vinyl Chloride											
	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4
	(ppmv)				(ppm)				(µg/m³)			
9/21/2006	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
10/6/2006	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
10/13/2006	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
10/20/2006	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
11/17/2006	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
12/27/2006	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
3/30/2007	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
6/15/2007	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
10/16/2007	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
12/14/2007	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
3/27/2008	0.0150	NS	0.0150	0.0150	0.0000	NS	0.0000	0.0000	38.42	NS	38.42	38.42
4/1/2008	NS	0.0150	NS	NS	NS	0.0000	NS	NS	NS	38.42	NS	NS
6/2/2008	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
9/12/2008	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
11/26/2008	0.0150	NS	0.0150	0.0150	0.0000	NS	0.0000	0.0000	38.42	NS	38.42	38.42
3/24/2009	0.0150	NS	0.0150	0.0150	0.0000	NS	0.0000	0.0000	38.42	NS	38.42	38.42
6/15/2009	0.0150	NS	0.0150	0.0150	0.0000	NS	0.0000	0.0000	38.42	NS	38.42	38.42
8/31/2009	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42
11/5/2009	0.0150	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	0.0000	38.42	38.42	38.42	38.42

NS = Not sampled

*Italic* = Reported values are below laboratory detection limits.

Concentrations of PCE, TCE, and cis-1,2-Dichloroethylene assumed at 1/2 reported detection limit. Concentrations of vinyl chloride assumed at 0.15ppmv, the mean detected concentration below reporting limits.

**Air Mitigation - Historical Air Analytical Results**  
**Michigan Plaza**  
**Indianapolis, Indiana**  
**MUNDELL Project No.: M01046**

Sample Date	cis-1,2-Dichloroethylene											
	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4
	(ppmv)				(ppm)				(µg/m³)			
9/21/2006	0.1400	0.0100	0.0100	0.0100	0.0006	0.0000	0.0000	0.0000	556.22	39.73	39.73	39.73
10/6/2006	0.0300	0.0100	0.0100	0.0100	0.0001	0.0000	0.0000	0.0000	119.19	39.73	39.73	39.73
10/13/2006	0.0100	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	0.0000	39.73	39.73	39.73	39.73
10/20/2006	0.0100	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	0.0000	39.73	39.73	39.73	39.73
11/17/2006	0.0100	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	0.0000	39.73	39.73	39.73	39.73
12/27/2006	0.0240	0.0100	0.0100	0.0100	0.0001	0.0000	0.0000	0.0000	95.35	39.73	39.73	39.73
3/30/2007	0.0100	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	0.0000	39.73	39.73	39.73	39.73
6/15/2007	0.2100	0.0100	0.0100	0.0100	0.0008	0.0000	0.0000	0.0000	834.33	39.73	39.73	39.73
10/16/2007	0.0100	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	0.0000	39.73	39.73	39.73	39.73
12/14/2007	0.0100	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	0.0000	39.73	39.73	39.73	39.73
3/27/2008	0.0340	NS	0.0100	0.0100	0.0001	NS	0.0000	0.0000	135.08	NS	39.73	39.73
4/1/2008	NS	0.0100	NS	NS	NS	0.0000	NS	NS	NS	39.73	NS	NS
6/2/2008	0.0100	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	0.0000	39.73	39.73	39.73	39.73
9/12/2008	0.0100	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	0.0000	39.73	39.73	39.73	39.73
11/26/2008	0.0100	NS	0.0100	0.0100	0.0000	NS	0.0000	0.0000	39.73	NS	39.73	39.73
3/24/2009	0.0100	NS	0.0100	0.0100	0.0000	NS	0.0000	0.0000	39.73	NS	39.73	39.73
6/15/2009	0.0100	NS	0.0100	0.0100	0.0000	NS	0.0000	0.0000	39.73	NS	39.73	39.73
8/31/2009	0.0100	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	0.0000	39.73	39.73	39.73	39.73
11/5/2009	0.0100	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	0.0000	39.73	39.73	39.73	39.73

NS = Not sampled

*Italic* = Reported values are below laboratory detection limits.

Concentrations of PCE, TCE, and cis-1,2-Dichloroethylene assumed at 1/2 reported detection limit. Concentrations of vinyl chloride assumed at 0.15ppmv, the mean detected concentration below reporting limits.

Air Mitigation System - Historical Air Analytical Results									
Michigan Meadows Apartments									
Indianapolis, Indiana									
MUNDELL Project No.: M01046									
Sample Date	Perchloroethylene (PCE)								
	B-5	B-6	B-7	B-5	B-6	B-7	B-5	B-6	B-7
	(ppmv)			(ppm)			( $\mu\text{g}/\text{m}^3$ )		
3/27/2008	0.1300	1.2000	NS	0.0009	0.0082	NS	883.48	8155.20	NS
3/28/2008	0.0730	0.4900	NS	0.0005	0.0033	NS	496.11	3330.04	NS
4/7/2008	NS	NS	0.0760	NS	NS	0.0005	NS	NS	516.50
4/8/2008	NS	NS	0.0470	NS	NS	0.0003	NS	NS	319.41
4/24/2008	0.0540	0.1100	0.0220	0.0004	0.0007	0.0001	366.98	747.56	149.51
5/1/2008	0.0580	0.2100	0.0390	0.0004	0.0014	0.0003	394.17	1427.16	265.04
6/2/2008	0.0590	0.2200	0.0530	0.0004	0.0015	0.0004	400.96	1495.12	360.19
7/10/2008	0.0650	NS	0.0540	0.0004	NS	0.0004	441.74	NS	366.98
8/20/2008	NS	0.2700	NS	NS	0.0018	NS	NS	1834.92	NS
9/12/2008	0.0690	0.1800	0.0540	0.0005	0.0012	0.0004	468.92	1223.28	366.98
11/26/2008	0.0720	0.1100	0.0560	0.0005	0.0007	0.0004	489.31	747.56	380.58
3/24/2009	0.2100	0.1300	0.0590	0.0014	0.0009	0.0004	1427.16	883.48	400.96
6/15/2009	0.0580	0.0840	<i>0.0050</i>	0.0004	0.0006	0.0000	394.17	570.86	33.98
8/21/2009	0.0630	0.0710	<i>0.0050</i>	0.0004	0.0005	0.0000	428.15	482.52	33.98
11/5/2009	0.1300	0.1100	<i>0.0050</i>	0.0009	0.0007	0.0000	883.48	747.56	33.98

NS = Not sampled

*Italic* = Reported values are below laboratory detection limits.

Concentrations of PCE, TCE, and cis-1,2-Dichloroethylene assumed at 1/2 reported detection limit. Concentrations of vinyl chloride assumed at 0.15ppmv, the mean detected concentration below reporting limits.

Air Mitigation - Historical Air Analytical Results									
Michigan Meadows Apartments									
Indianapolis, Indiana									
MUNDELL Project No.: M01046									
Sample Date	Trichloroethylene (TCE)								
	B-5	B-6	B-7	B-5	B-6	B-7	B-5	B-6	B-7
	(ppmv)			(ppm)			( $\mu\text{g}/\text{m}^3$ )		
3/27/2008	0.0050	0.0050	NS	0.0000	0.0000	NS	26.93	26.93	NS
3/28/2008	0.0050	0.0050	NS	0.0000	0.0000	NS	26.93	26.93	NS
4/7/2008	NS	NS	0.0050	NS	NS	0.0000	NS	NS	26.93
4/8/2008	NS	NS	0.0050	NS	NS	0.0000	NS	NS	26.93
4/24/2008	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	26.93	26.93	26.93
5/1/2008	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	26.93	26.93	26.93
6/2/2008	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	26.93	26.93	26.93
7/10/2008	0.0050	NS	0.0050	0.0000	NS	0.0000	26.93	NS	26.93
8/20/2008	NS	0.0050	NS	NS	0.0000	NS	NS	26.93	NS
9/12/2008	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	26.93	26.93	26.93
11/26/2008	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	26.93	26.93	26.93
3/24/2009	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	26.93	26.93	26.93
6/15/2009	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	26.93	26.93	26.93
8/21/2009	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	26.93	26.93	26.93
11/5/2009	0.0050	0.0050	0.0050	0.0000	0.0000	0.0000	26.93	26.93	26.93

NS = Not sampled

*Italic* = Reported values are below laboratory detection limits.

Concentrations of PCE, TCE, and cis-1,2-Dichloroethylene assumed at 1/2 reported detection limit. Concentrations of vinyl chloride assumed at 0.15ppmv, the mean detected concentration below reporting limits.

Air Mitigation - Historical Air Analytical Results									
Michigan Meadows Apartments									
Indianapolis, Indiana									
MUNDELL Project No.: M01046									
Sample Date	Vinyl Chloride								
	B-5	B-6	B-7	B-5	B-6	B-7	B-5	B-6	B-7
	(ppmv)			(ppm)			( $\mu\text{g}/\text{m}^3$ )		
3/27/2008	0.0150	0.0150	NS	0.0000	0.0000	NS	38.42	38.42	NS
3/28/2008	0.0150	0.0150	NS	0.0000	0.0000	NS	38.42	38.42	NS
4/7/2008	NS	NS	0.0150	NS	NS	0.0000	NS	NS	38.42
4/8/2008	NS	NS	0.0150	NS	NS	0.0000	NS	NS	38.42
4/24/2008	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	38.42	38.42	38.42
5/1/2008	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	38.42	38.42	38.42
6/2/2008	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	38.42	38.42	38.42
7/10/2008	0.0150	NS	0.0150	0.0000	NS	0.0000	38.42	NS	38.42
8/20/2008	NS	0.0150	NS	NS	0.0000	NS	NS	38.42	NS
9/12/2008	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	38.42	38.42	38.42
11/26/2008	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	38.42	38.42	38.42
3/24/2009	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	38.42	38.42	38.42
6/15/2009	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	38.42	38.42	38.42
8/21/2009	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	38.42	38.42	38.42
11/5/2009	0.0150	0.0150	0.0150	0.0000	0.0000	0.0000	38.42	38.42	38.42

NS = Not sampled

*Italic* = Reported values are below laboratory detection limits.

Concentrations of PCE, TCE, and cis-1,2-Dichloroethylene assumed at 1/2 reported detection limit. Concentrations of vinyl chloride assumed at 0.15ppmv, the mean detected concentration below reporting limits.

Air Mitigation - Historical Air Analytical Results									
Michigan Meadows Apartments									
Indianapolis, Indiana									
MUNDELL Project No.: M01046									
Sample Date	cis-1,2-Dichloroethylene								
	B-5	B-6	B-7	B-5	B-6	B-7	B-5	B-6	B-7
	(ppmv)			(ppm)			( $\mu\text{g}/\text{m}^3$ )		
3/27/2008	0.0100	0.0100	NS	0.0000	0.0000	NS	39.73	39.73	NS
3/28/2008	0.0100	0.0100	NS	0.0000	0.0000	NS	39.73	39.73	NS
4/7/2008	NS	NS	0.0100	NS	NS	0.0000	NS	NS	39.73
4/8/2008	NS	NS	0.0100	NS	NS	0.0000	NS	NS	39.73
4/24/2008	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	39.73	39.73	39.73
5/1/2008	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	39.73	39.73	39.73
6/2/2008	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	39.73	39.73	39.73
7/10/2008	0.0100	NS	0.0100	0.0000	NS	0.0000	39.73	NS	39.73
8/20/2008	NS	0.0100	NS	NS	0.0000	NS	NS	39.73	NS
9/12/2008	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	39.73	39.73	39.73
11/26/2008	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	39.73	39.73	39.73
3/24/2009	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	39.73	39.73	39.73
6/15/2009	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	39.73	39.73	39.73
8/21/2009	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	39.73	39.73	39.73
11/5/2009	0.0100	0.0100	0.0100	0.0000	0.0000	0.0000	39.73	39.73	39.73

NS = Not sampled

*Italic* = Reported values are below laboratory detection limits.

Concentrations of PCE, TCE, and cis-1,2-Dichloroethylene assumed at 1/2 reported detection limit. Concentrations of vinyl chloride assumed at 0.15ppmv, the mean detected concentration below reporting limits.

**Lab Data for Air Mitigation System B-1**  
**Fourth Quarter 2009**  
**11/5/2009**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

B-1 (Lab Data)													B-1 (PID Readings)									
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m³ PCE	Lbs. PCE removed	µg/m³ TCE	Lbs. TCE removed	µg/m³ VC	Lbs. VC removed	µg/m³ cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed (ug/m³)	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed	Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m³ VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)
9/21/2006	0.5	73	2,190	4,281	0.00	129	0.00	38	0.00	556	0.00	0.00	0.00	0.00	9/21/2006	0.5	73	2,190	4.9	10,439	0.00	0.00
10/6/2006	360	73	1,576,800	5,980	0.59	65	0.01	38	0.00	119	0.01	0.61	0.59	0.61	9/28/2006	168	73	735,840	1.9	4,841	0.22	0.22
10/13/2006	168	73	735,840	4,621	0.21	27	0.00	38	0.00	40	0.00	0.22	0.80	0.83	10/6/2006	192	73	840,960	1.0	3,162	0.17	0.39
10/20/2006	168	73	735,840	5,913	0.27	27	0.00	38	0.00	40	0.00	0.28	1.07	1.10	10/13/2006	168	73	735,840	0.6	2,322	0.11	0.50
11/17/2006	672	73	2,943,360	5,505	1.01	27	0.00	38	0.01	40	0.01	1.03	2.08	2.13	10/20/2006	168	73	735,840	0.3	1,902	0.09	0.58
12/27/2006	960	73	4,204,800	5,029	1.32	27	0.01	38	0.01	95	0.03	1.36	3.40	3.50	11/17/2006	672	73	2,943,360	0.1	1,483	0.27	0.86
3/30/2007	2,232	73	9,776,160	3,466	2.11	27	0.02	38	0.02	40	0.02	2.18	5.52	5.67	12/27/2006	960	73	4,204,800	0.0	1,296	0.34	1.20
6/15/2007	1,848	73	8,094,240	34	0.02	2,477	1.25	38	0.02	834	0.42	1.71	5.53	7.38	6/15/2007	4,080	73	17,870,400	0.1	1,483	1.65	2.85
10/16/2007	2,952	73	12,929,760	2,650	2.14	27	0.02	38	0.03	40	0.03	2.22	7.67	9.60	10/16/2007	2,952	73	12,929,760	0.1	1,483	1.20	4.04
12/14/2007	1,416	73	6,202,080	3,942	1.52	27	0.01	38	0.01	40	0.02	1.57	9.20	11.17	12/14/2007	1,416	73	6,202,080	0.1	1,483	0.57	4.62
3/27/2008	2,496	73	10,932,480	3,738	2.55	27	0.02	38	0.03	135	0.09	2.69	11.74	13.86	3/27/2008	2,496	73	10,932,480	1.7	4,468	3.05	7.66
6/2/2008	1,608	73	7,043,040	4,893	2.15	27	0.01	38	0.02	40	0.02	2.20	13.89	16.05	6/2/2008	1,608	73	7,043,040	2.2	5,401	2.37	10.04
9/12/2008	2,448	73	10,722,240	3,262	2.18	27	0.02	38	0.03	40	0.03	2.25	16.08	18.30	9/12/2008	2,448	73	10,722,240	0.3	1,856	1.24	11.28
11/26/2008	1,800	73	7,884,000	3,126	1.54	27	0.01	38	0.02	40	0.02	1.59	17.61	19.89	11/26/2008	1,800	73	7,884,000	0.1	1,483	0.73	12.01
3/24/2009	2,832	73	12,404,160	3,058	2.37	27	0.02	38	0.03	40	0.03	2.45	19.98	22.34	3/24/2009	2,832	73	12,404,160	0.2	1,669	1.29	13.30
6/15/2009	1,992	73	8,724,960	2,922	1.59	27	0.01	38	0.02	40	0.02	1.65	21.57	23.99	6/15/2009	1,992	73	8,724,960	0.2	1,669	0.91	14.21
8/21/2009	1,608	73	7,043,040	2,447	1.07	27	0.01	38	0.02	40	0.02	1.12	22.65	25.11	8/21/2009	1,608	73	7,043,040	0.2	1,669	0.73	14.94
11/5/2009	1,824	73	7,989,120	2,243	1.12	27	0.01	38	0.02	40	0.02	1.17	23.76	26.28	11/5/2009	1,824	73	7,989,120	0.2	1,669	0.83	15.77
<b>TOTALS:</b>	<b>27,385</b>		<b>119,944,110</b>		<b>23.76</b>		<b>1.44</b>		<b>0.29</b>		<b>0.79</b>		<b>26.28</b>		<b>TOTALS:</b>	<b>27,385</b>		<b>119,944,110</b>		<b>15.77</b>		

**Lab Data for Air Mitigation System B-2**  
**Fourth Quarter 2009**  
**11/5/2009**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

B-2 (Lab Data)														B-2 (PID Readings)								
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m³ PCE	Lbs. PCE removed	µg/m³ TCE	Lbs. TCE removed	µg/m³ VC	Lbs. VC removed	µg/m³ cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed	Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m³ VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)
9/21/2006	0.5	37	1,110	5,369	0.00	65	0.00	38	0.00	40	0.00	0.00	0.00	0.00	9/21/2006	0.5	37	1,110	2.0	5,028	0.00	0.00
10/6/2006	360	37	799,200	4,553	0.23	27	0.00	38	0.00	40	0.00	0.23	0.23	0.23	9/28/2006	168	37	372,960	2.0	5,028	0.12	0.12
10/13/2006	168	37	372,960	2,447	0.06	27	0.00	38	0.00	40	0.00	0.06	0.28	0.29	10/6/2006	192	37	426,240	1.1	3,255	0.09	0.20
10/20/2006	168	37	372,960	3,738	0.09	27	0.00	38	0.00	40	0.00	0.09	0.37	0.38	10/13/2006	168	37	372,960	0.6	2,369	0.06	0.26
11/17/2006	672	37	1,491,840	3,194	0.30	27	0.00	38	0.00	40	0.00	0.31	0.67	0.69	10/20/2006	168	37	372,960	0.3	1,926	0.04	0.30
12/27/2006	960	37	2,131,200	3,194	0.42	27	0.00	38	0.01	40	0.01	0.44	1.09	1.13	11/17/2006	672	37	1,491,840	0.1	1,483	0.14	0.44
3/30/2007	2,232	38	5,088,960	1,223	0.39	27	0.01	38	0.01	40	0.01	0.42	1.48	1.55	12/27/2006	960	37	2,131,200	0.1	1,483	0.20	0.64
6/15/2007	1,848	42	4,656,960	2,107	0.61	27	0.01	38	0.01	40	0.01	0.64	2.09	2.19	6/15/2007	4,080	41	10,036,800	0.1	1,483	0.93	1.57
10/16/2007	2,952	48	8,501,760	1,631	0.86	27	0.01	38	0.02	40	0.02	0.92	2.96	3.11	10/16/2007	2,952	48	8,501,760	0.1	1,483	0.79	2.35
12/14/2007	1,416	53	4,502,880	2,311	0.65	27	0.01	38	0.01	40	0.01	0.68	3.61	3.79	12/14/2007	1,416	53	4,502,880	0.1	1,483	0.42	2.77
4/1/2008	2,616	50	7,848,000	2,447	1.20	27	0.01	38	0.02	40	0.02	1.25	4.81	5.04	6/2/2008	4,104	46.5	11,450,160	1.5	4,095	2.92	5.69
6/2/2008	1,488	42	3,705,120	3,806	0.88	27	0.01	38	0.01	40	0.01	0.90	5.68	5.94	9/12/2008	2,448	37	5,434,560	0.5	2,229	0.76	6.45
9/12/2008	2,448	37	5,434,560	3,194	1.08	27	0.01	38	0.01	40	0.01	1.12	6.77	7.06	11/5/2009	1,440	37	3,196,800	0.1	1,483	0.30	6.75
8/21/2009	1,440	37	3,196,800	1,087	0.22	27	0.01	38	0.01	40	0.01	0.24	6.98	7.30	<b>TOTALS:</b>	<b>18,769</b>	<b>48,292,230</b>		<b>6.75</b>			
11/5/2009	1,824	37	4,049,280	951	0.24	27	0.01	38	0.01	40	0.01	0.27	7.22	7.57								
<b>TOTALS:</b>	<b>20,593</b>		<b>52,153,590</b>		<b>7.22</b>		<b>0.09</b>		<b>0.12</b>		<b>0.13</b>		<b>7.57</b>									

**Lab Data for Air Mitigation System B-3**  
**Fourth Quarter 2009**  
**11/5/2009**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

B-3 (Lab Data)														B-3 (PID Readings)								
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m³ PCE	Lbs. PCE removed	µg/m³ TCE	Lbs. TCE removed	µg/m³ VC	Lbs. VC removed	µg/m³ cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed	Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m³ VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)
9/21/2006	0.5	132	3,960	4,553	0.00	27	0.00	38	0.00	40	0.00	0.00	0.00	0.00	9/21/2006	0.5	132	3,960	1.8	4,655	0.00	0.00
10/6/2006	360	132	2,851,200	6,592	1.17	27	0.00	38	0.01	40	0.01	1.19	1.17	1.19	9/28/2006	168	132	1,330,560	2.2	5,401	0.45	0.45
10/13/2006	168	132	1,330,560	3,534	0.29	27	0.00	38	0.00	40	0.00	0.30	1.47	1.49	10/6/2006	192	132	1,520,640	2.1	5,215	0.49	0.94
10/20/2006	168	132	1,330,560	6,048	0.50	27	0.00	38	0.00	40	0.00	0.51	1.97	2.01	10/13/2006	168	132	1,330,560	2.1	5,121	0.43	1.37
11/17/2006	672	132	5,322,240	5,301	1.76	27	0.01	38	0.01	40	0.01	1.79	3.73	3.80	10/20/2006	168	132	1,330,560	2.0	5,075	0.42	1.79
12/27/2006	960	132	7,603,200	5,097	2.42	27	0.01	38	0.02	40	0.02	2.47	6.15	6.27	11/17/2006	672	132	5,322,240	2.0	5,028	1.67	3.46
3/30/2007	2,232	132	17,677,440	3,874	4.27	27	0.03	38	0.04	40	0.04	4.39	10.42	10.65	12/27/2006	960	132	7,603,200	0.1	1,483	0.70	4.16
6/15/2007	1,848	132	14,636,160	1,427	1.30	27	0.02	38	0.04	40	0.04	1.40	11.72	12.05	6/15/2007	4,080	132	32,313,600	0.1	1,483	2.99	7.15
10/16/2007	2,952	132	23,379,840	1,903	2.78	27	0.04	38	0.06	40	0.06	2.93	14.50	14.98	10/16/2007	2,952	132	23,379,840	0.1	1,483	2.16	9.31
12/14/2007	1,416	132	11,214,720	3,534	2.47	27	0.02	38	0.03	40	0.03	2.55	16.97	17.53	12/14/2007	1,416	132	11,214,720	0.1	1,483	1.04	10.35
3/27/2008	2,496	132	19,768,320	3,806	4.69	27	0.03	38	0.05	40	0.05	4.82	21.66	22.35	3/27/2008	2,496	132	19,768,320	1.3	3,722	4.59	14.94
6/2/2008	1,608	132	12,735,360	3,330	2.65	27	0.02	38	0.03	40	0.03	2.73	24.31	25.08	6/2/2008	1,608	132	12,735,360	1.2	3,535	2.81	17.75
9/12/2008	2,448	132	19,388,160	3,602	4.36	27	0.03	38	0.05	40	0.05	4.48	28.66	29.56	9/12/2008	2,448	132	19,388,160	0.5	2,229	2.70	20.44
11/26/2008	1,800	132	14,256,000	2,447	2.18	27	0.02	38	0.03	40	0.04	2.27	30.84	31.83	11/26/2008	1,800	132	14,256,000	0.4	2,042	1.82	22.26
3/24/2009	2,832	132	22,429,440	3,738	5.23	27	0.04	38	0.05	40	0.06	5.38	36.07	37.21	3/24/2009	2,832	132	22,429,440	0.6	2,416	3.38	25.64
6/15/2009	1,992	132	15,776,640	2,854	2.81	27	0.03	38	0.04	40	0.04	2.91	38.88	40.12	6/15/2009	1,992	132	15,776,640	0.6	2,416	2.38	28.02
8/21/2009	1,608	132	12,735,360	3,194	2.54	27	0.02	38	0.03	40	0.03	2.62	41.41	42.74	8/31/2009	1,848	132	14,636,160	0.6	2,416	2.21	30.22
11/5/2009	1,824	132	14,446,080	2,786	2.51	27	0.02	38	0.03	40	0.04	2.61	43.93	45.35	11/5/2009	1,584	132	12,545,280	0.6	2,416	1.89	32.11
<b>TOTALS:</b>	<b>27,385</b>		<b>216,885,240</b>		<b>43.93</b>		<b>0.36</b>		<b>0.52</b>		<b>0.54</b>	<b>45.35</b>			<b>TOTALS:</b>	<b>27,385</b>		<b>216,885,240</b>			<b>32.11</b>	

**Lab Data for Air Mitigation System B-4**  
**Fourth Quarter 2009**  
**11/5/2009**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

B-4 (Lab Data)														B-4 (PID Readings)								
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m³ PCE	Lbs. PCE removed	µg/m³ TCE	Lbs. TCE removed	µg/m³ VC	Lbs. VC removed	µg/m³ cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed	Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m³ VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)
9/21/2006	0.5	132	3,960	1,903	0.00	27	0.00	38	0.00	40	0.00	0.00	0.00	0.00	9/21/2006	0.5	132	3,960	0.2	1,669	0.00	0.00
10/6/2006	360	132	2,851,200	2,107	0.37	27	0.00	38	0.01	40	0.01	0.39	0.38	0.39	9/28/2006	168	132	1,330,560	0.4	2,042	0.17	0.17
10/13/2006	168	132	1,330,560	1,427	0.12	27	0.00	38	0.00	40	0.00	0.13	0.49	0.52	10/6/2006	192	132	1,520,640	0.3	1,763	0.17	0.34
10/20/2006	168	132	1,330,560	1,495	0.12	27	0.00	38	0.00	40	0.00	0.13	0.62	0.65	10/13/2006	168	132	1,330,560	0.2	1,623	0.13	0.47
11/17/2006	672	132	5,322,240	1,019	0.34	27	0.01	38	0.01	40	0.01	0.37	0.96	1.03	10/20/2006	168	132	1,330,560	0.1	1,553	0.13	0.60
12/27/2006	960	132	7,603,200	748	0.35	27	0.01	38	0.02	40	0.02	0.40	1.31	1.43	11/17/2006	672	132	5,322,240	0.1	1,483	0.49	1.09
3/30/2007	2,232	130	17,342,640	211	0.23	27	0.03	38	0.04	40	0.04	0.34	1.54	1.77	12/27/2006	960	132	7,603,200	0.1	1,483	0.70	1.80
6/15/2007	1,848	125	13,887,720	3,126	2.71	27	0.02	38	0.03	40	0.03	2.80	4.25	4.57	6/15/2007	4,080	127.75	31,273,200	0.1	1,483	2.89	4.69
10/16/2007	2,952	128	22,627,080	455	0.64	27	0.04	38	0.05	40	0.06	0.79	4.89	5.36	10/16/2007	2,952	128	22,671,360	0.1	1,483	2.10	6.78
12/14/2007	1,416	132	11,214,720	951	0.67	27	0.02	38	0.03	40	0.03	0.74	5.56	6.10	12/14/2007	1,416	132	11,214,720	0.1	1,483	1.04	7.82
3/27/2008	2,496	128	19,094,400	503	0.60	27	0.03	38	0.05	40	0.05	0.72	6.15	6.83	3/29/2008	2,544	128	19,537,920	1.8	4,655	5.67	13.50
6/2/2008	1,608	119	11,481,120	680	0.49	27	0.02	38	0.03	40	0.03	0.56	6.64	7.39	6/2/2008	1,560	119	11,138,400	0.3	1,856	1.29	14.78
9/12/2008	2,448	132	19,388,160	883	1.07	27	0.03	38	0.05	40	0.05	1.20	7.71	8.58	9/12/2008	2,448	132	19,388,160	0.4	2,042	2.47	17.25
11/26/2008	1,800	132	14,256,000	748	0.66	27	0.02	38	0.03	40	0.04	0.76	8.37	9.34	11/26/2008	1,800	132	14,256,000	0.1	1,483	1.32	18.57
3/24/2009	2,832	132	22,429,440	34	0.05	27	0.04	38	0.05	40	0.06	0.19	8.42	9.54	3/24/2009	2,832	132	22,429,440	0.3	1,763	2.47	21.04
6/15/2009	1,992	132	15,776,640	136	0.13	27	0.03	38	0.04	40	0.04	0.24	8.56	9.77	6/15/2009	1,992	132	15,776,640	0.3	1,856	1.83	22.87
8/21/2009	1,608	132	12,735,360	95	0.08	27	0.02	38	0.03	40	0.03	0.16	8.63	9.93	8/31/2009	1,848	132	14,636,160	0.3	1,856	1.69	24.56
11/5/2009	1,824	132	14,446,080	34	0.03	27	0.02	38	0.03	40	0.04	0.13	8.66	10.06	11/5/2009	1,584	132	12,545,280	0.3	1,856	1.45	26.01
<b>TOTALS:</b>	<b>27,385</b>		<b>213,121,080</b>		<b>8.66</b>		<b>0.36</b>		<b>0.51</b>		<b>0.53</b>	<b>10.06</b>			<b>TOTALS:</b>	<b>27,385</b>		<b>213,309,000</b>		<b>26.01</b>		

**Lab Data for Air Mitigation System B-5**  
**Fourth Quarter 2009**  
**11/5/2009**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

B-5 (Lab Data)														B-5 (PID Readings)								
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m³ PCE	Lbs. PCE removed	µg/m³ TCE	Lbs. TCE removed	µg/m³ VC	Lbs. VC removed	µg/m³ cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed	Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m³ VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)
3/27/2008	0.5	130	3,900	883	0.00	27	0.00	38	0.00	40	0.00	0.00	0.00	0.00	3/29/2008	50	119	357,000	0.1	1,483	0.03	0.03
3/28/2008	24	127	182,880	496	0.01	27	0.00	38	0.00	40	0.00	0.01	0.01	0.01	3/31/2008	48	118	339,840	0.2	1,669	0.04	0.07
4/24/2008	648	120	4,665,600	367	0.11	27	0.01	38	0.01	40	0.01	0.14	0.11	0.14	5/1/2008	744	116	5,178,240	0.1	1,483	0.48	0.55
5/1/2008	168	115	1,159,200	394	0.03	27	0.00	38	0.00	40	0.00	0.04	0.14	0.18	6/2/2008	768	114	5,253,120	0.2	1,669	0.55	1.09
6/2/2008	768	114	5,253,120	401	0.13	27	0.01	38	0.01	40	0.01	0.17	0.27	0.35	9/12/2008	2,448	114	16,744,320	0.1	1,483	1.55	2.64
7/10/2008	912	115	6,292,800	442	0.17	27	0.01	38	0.02	40	0.02	0.21	0.45	0.56	11/26/2008	1,800	113	12,204,000	0.1	1,483	1.13	3.77
9/12/2008	1,536	114	10,506,240	469	0.31	27	0.02	38	0.03	40	0.03	0.38	0.75	0.94	3/24/2009	2,832	122	20,730,240	0.1	1,483	1.92	5.69
11/26/2008	1,800	113	12,204,000	489	0.37	27	0.02	38	0.03	40	0.03	0.45	1.13	1.39	6/15/2009	1,992	122	14,581,440	0.1	1,483	1.35	7.04
3/24/2009	2,832	122	20,730,240	1,427	1.85	27	0.03	38	0.05	40	0.05	1.98	2.97	3.37	8/31/2009	3,840	122	28,108,800	0.1	1,483	2.60	9.64
6/15/2009	1,992	122	14,581,440	394	0.36	27	0.02	38	0.03	40	0.04	0.45	3.33	3.83	11/5/2009	1,584	122	11,594,880	0.1	1,483	1.07	10.71
8/21/2009	1,608	122	11,770,560	428	0.31	27	0.02	38	0.03	40	0.03	0.39	3.64	4.22	<b>TOTALS:</b>	<b>16,106</b>		<b>115,091,880</b>		<b>10.71</b>		
11/5/2009	1,824	122	13,351,680	883	0.74	27	0.02	38	0.03	40	0.03	0.82	4.38	5.04								
<b>TOTALS:</b>	<b>14,113</b>		<b>100,701,660</b>		<b>4.38</b>		<b>0.17</b>		<b>0.24</b>		<b>0.25</b>	<b>5.04</b>										

**Lab Data for Air Mitigation System B-6**  
**Fourth Quarter 2009**  
**11/5/2009**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

B-6 (Lab Data)														B-6 (PID Readings)							
Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m³ PCE	Lbs. PCE removed	µg/m³ TCE	µg/m³ VC	Lbs. VC removed	µg/m³ cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed	Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m³ VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)
3/27/2008	0.5	130	3,900	8,155	0.00	27	0.00	38	0.00	40	0.00	0.00	0.00	3/29/2008	50	110	330,000	1.7	4,468	0.09	0.09
3/28/2008	24	119	171,144	3,330	0.04	27	0.00	38	0.00	40	0.00	0.04	0.04	3/31/2008	48	111	319,680	0.1	1,483	0.03	0.12
4/24/2008	648	114	4,426,488	748	0.21	27	0.01	38	0.01	40	0.01	0.24	0.24	5/1/2008	744	118	5,267,520	0.3	1,856	0.61	0.73
5/1/2008	168	123	1,234,800	1,427	0.11	27	0.00	38	0.00	40	0.00	0.12	0.35	6/2/2008	768	120	5,529,600	1.1	3,349	1.16	1.89
6/2/2008	768	120	5,506,560	1,495	0.51	27	0.01	38	0.01	40	0.01	0.55	0.87	9/12/2008	2,448	114	16,744,320	0.1	1,483	1.55	3.43
8/20/2008	1,896	120	13,651,200	1,835	1.56	27	0.02	38	0.03	40	0.03	1.65	2.43	11/26/2008	1,800	114	12,312,000	0.2	1,669	1.28	4.72
9/12/2008	552	114	3,775,680	1,223	0.29	27	0.01	38	0.01	40	0.01	0.31	2.72	3/24/2009	2,832	118	20,050,560	0.3	1,856	2.32	7.04
11/26/2008	1,800	112	12,096,000	748	0.56	27	0.02	38	0.03	40	0.03	0.64	3.28	6/15/2009	1,992	118	14,103,360	0.3	1,856	1.63	8.67
3/24/2009	2,832	118	20,050,560	883	1.10	27	0.03	38	0.05	40	0.05	1.24	4.39	8/31/2009	1,848	118	13,083,840	0.3	1,856	1.51	10.19
6/15/2009	1,992	118	14,103,360	571	0.50	27	0.02	38	0.03	40	0.03	0.59	4.89	11/5/2009	1,584	118	11,214,720	0.3	1,856	1.30	11.48
8/21/2009	1,608	118	11,384,640	483	0.34	27	0.02	38	0.03	40	0.03	0.42	5.23	<b>TOTALS:</b>	<b>14,114</b>	<b>98,955,600</b>		<b>11.48</b>			
11/5/2009	1,824	118	12,913,920	748	0.60	27	0.02	38	0.03	40	0.03	0.69	5.83								
<b>TOTALS:</b>	<b>14,113</b>		<b>99,318,252</b>		<b>5.83</b>		<b>0.17</b>		<b>0.24</b>		<b>0.25</b>	<b>6.49</b>									

**Lab Data for Air Mitigation System B-7**

**Fourth Quarter 2009**

**11/5/2009**

**Michigan Plaza**

**3801-3823 West Michigan Street**

**Indianapolis, Indiana**

**MUNDELL Project No. M01046**

**B-7 (Lab Data)**

Sample Date	Hours per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	µg/m³ PCE	Lbs. PCE removed	µg/m³ TCE	Lbs. TCE removed	µg/m³ VC	Lbs. VC removed	µg/m³ cis-1,2-DCE	Lbs. cis-1,2-DCE removed	Lbs. Total Pollutants Removed	Cumulative PCE lbs Removed	Cumulative Total Pollutant lbs Removed
4/7/2008	0.5	117	3,510	516	0.00	27	0.00	38	0.00	40	0.00	0.00	0.00	0.00
4/8/2008	24	117	168,480	319	0.00	27	0.00	38	0.00	40	0.00	0.00	0.00	0.00
4/24/2008	384	117	2,695,680	150	0.03	27	0.00	38	0.01	40	0.01	0.04	0.03	0.05
5/1/2008	168	120	1,209,600	265	0.02	27	0.00	38	0.00	40	0.00	0.03	0.05	0.08
6/2/2008	768	117	5,391,360	360	0.12	27	0.01	38	0.01	40	0.01	0.16	0.17	0.23
7/10/2008	912	118	6,456,960	367	0.15	27	0.01	38	0.02	40	0.02	0.19	0.32	0.42
9/12/2008	1,536	114	10,506,240	367	0.24	27	0.02	38	0.03	40	0.03	0.31	0.56	0.73
11/26/2008	1,800	112	12,096,000	381	0.29	27	0.02	38	0.03	40	0.03	0.37	0.85	1.10
3/24/2009	2,832	118	20,050,560	401	0.50	27	0.03	38	0.05	40	0.05	0.63	1.35	1.73
6/15/2009	1,992	118	14,103,360	34	0.03	27	0.02	38	0.03	40	0.03	0.12	1.38	1.85
8/21/2009	1,608	118	11,384,640	34	0.02	27	0.02	38	0.03	40	0.03	0.10	1.40	1.95
11/5/2009	1,824	118	12,913,920	34	0.03	27	0.02	38	0.03	40	0.03	0.11	1.43	2.06
<b>TOTALS:</b>	<b>13,849</b>		<b>96,980,310</b>		<b>1.43</b>		<b>0.16</b>		<b>0.23</b>		<b>0.24</b>		<b>2.06</b>	

**B-7 (PID Readings)**

Sample Date	Hours Per Cycle	Average Flow Rate (CFM)	Air Vol. Removed per Cycle (CF)	PID Reading (ppm VOCs)	µg/m³ VOCs	Lbs. VOCs Removed	Cum Total lbs Removed (Est from PID)
5/1/2008	576	120	4,147,200	0.1	1,483	0.38	0.38
6/2/2008	768	117	5,391,360	0.3	1,856	0.62	1.01
9/12/2008	2,448	114	16,744,320	0.1	1,483	1.55	2.56
11/26/2008	1,800	112	12,096,000	0.2	1,669	1.26	3.82
3/24/2009	2,832	118	20,050,560	0.3	1,856	2.32	6.14
6/15/2009	1,992	118	14,103,360	0.3	1,856	1.63	7.77
8/31/2009	1,848	118	13,083,840	0.3	1,856	1.51	9.28
11/5/2009	1,584	118	11,214,720	0.3	1,856	1.30	10.58
<b>TOTALS:</b>	<b>13,848</b>		<b>96,831,360</b>		<b>10.58</b>		

**Michigan Plaza**  
**Fourth Quarter 2009**  
**11/5/2009**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

<b>Cumulative Totals (B-1-B-4)</b>				
Sample Date	Lbs PCE Removed	Cumulative PCE lbs Removed	Lbs. Total Pollutants Removed	Cumulative Total Pollutant lbs Removed
9/21/2006	0.00	0.00	0.00	0.00
10/6/2006	2.36	2.36	2.43	2.43
10/13/2006	0.68	3.05	0.71	3.14
10/20/2006	0.98	4.03	1.01	4.14
11/17/2006	3.41	7.44	3.51	7.65
12/27/2006	4.52	11.95	4.67	12.32
3/30/2007	7.00	18.95	7.33	19.65
6/15/2007	4.64	23.59	6.55	26.20
10/16/2007	6.42	30.01	6.86	33.06
12/14/2007	5.31	35.33	5.53	38.59
3/27/2008	7.84	43.17	8.23	46.82
4/1/2008	1.20	44.36	1.25	48.07
6/2/2008	6.16	50.53	6.39	54.46
9/12/2008	8.69	59.22	9.05	63.51
11/26/2008	4.38	63.59	4.62	68.13
3/24/2009	7.64	71.24	8.02	76.15
6/15/2009	4.53	75.77	4.80	80.94
8/21/2009	3.90	79.67	4.14	85.08
11/5/2009	3.90	83.57	4.17	89.25

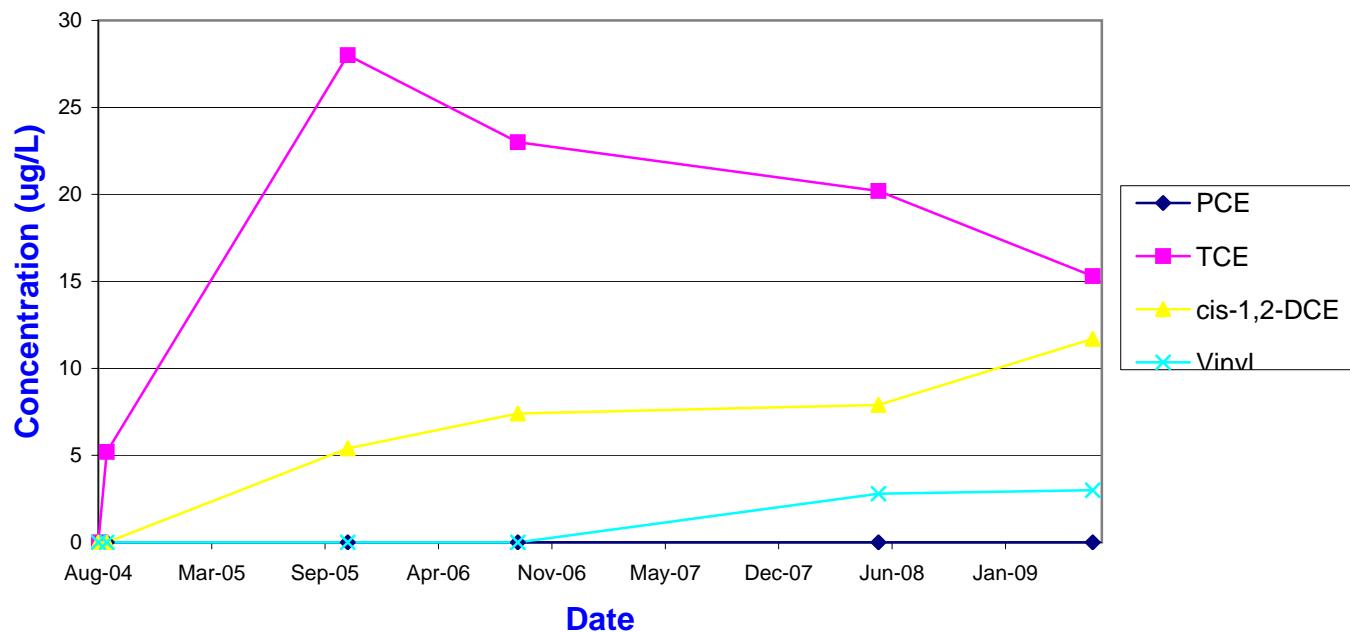
**Michigan Apartments**  
**Fourth Quarter 2009**  
**11/5/2009**  
**Michigan Plaza**  
**3801-3823 West Michigan Street**  
**Indianapolis, Indiana**  
**MUNDELL Project No. M01046**

<b>Cumulative Totals (B-5-B-7)</b>				
Sample Date	Lbs PCE Removed	Cumulative PCE lbs Removed	Lbs. Total Pollutants Removed	Cumulative Total Pollutant lbs Removed
3/27/2008	0.00	0.00	0.00	0.00
3/28/2008	0.04	0.04	0.04	0.05
4/7/2008	0.00	0.04	0.00	0.05
4/8/2008	0.00	0.05	0.00	0.05
4/24/2008	0.34	0.39	0.42	0.47
5/1/2008	0.16	0.54	0.18	0.65
6/2/2008	0.77	1.31	0.87	1.52
7/10/2008	0.32	1.63	0.40	1.92
8/20/2008	1.56	3.19	1.65	3.58
9/12/2008	0.84	4.03	1.00	4.58
11/26/2008	1.22	5.25	1.46	6.04
3/24/2009	3.45	8.71	3.85	9.89
6/15/2009	0.89	9.60	1.17	11.06
8/21/2009	0.68	10.28	0.91	11.97
11/5/2009	1.40	11.67	1.75	13.71

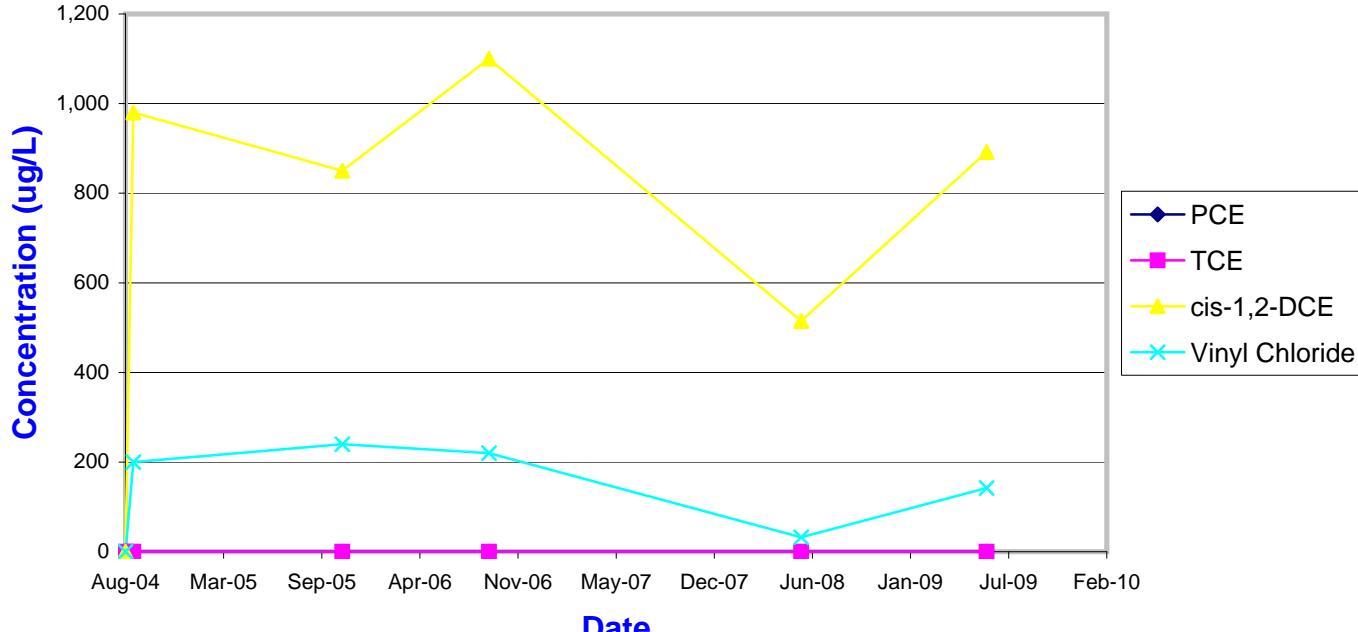
## **APPENDIX C**

### **Indicator Compound Trends at the Northern Wells**

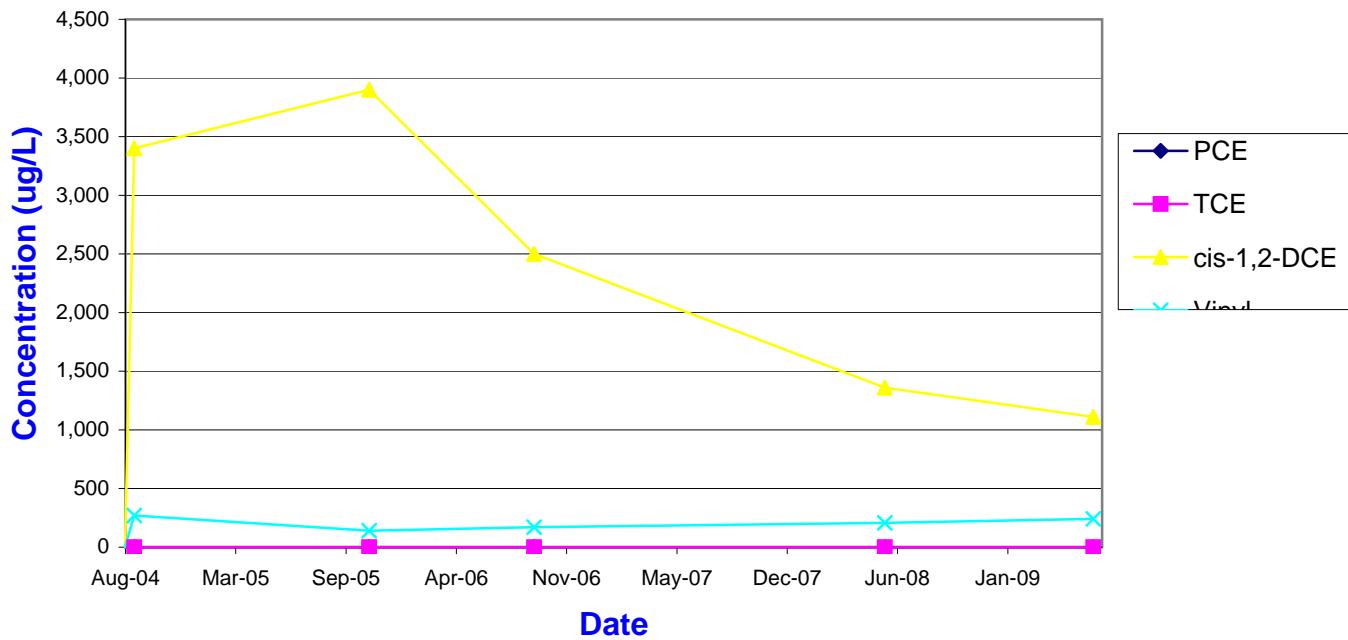
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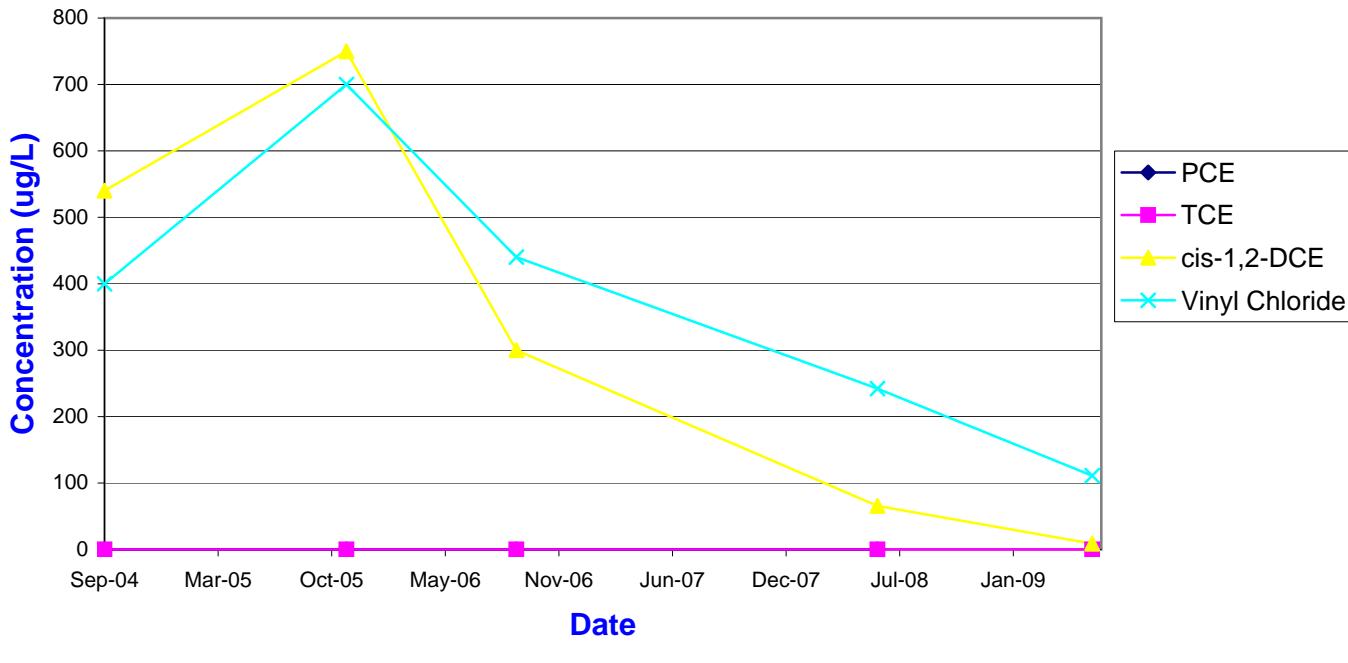
### MMW-4D



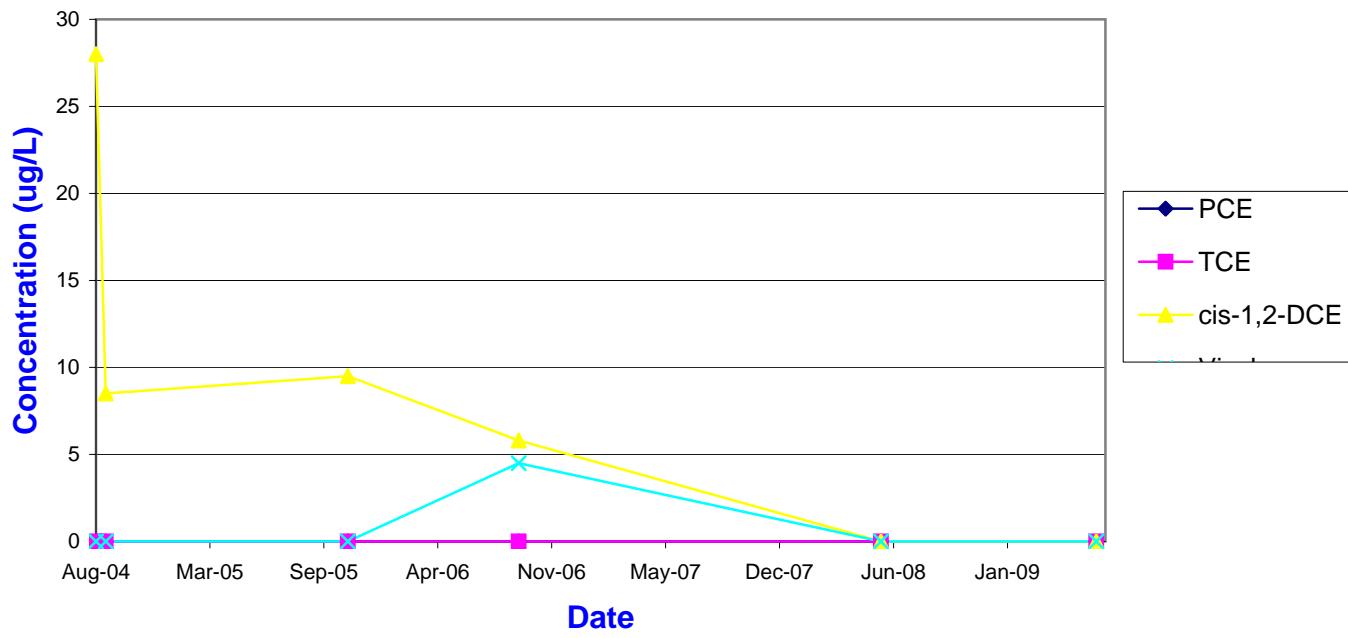
### MMW-5D



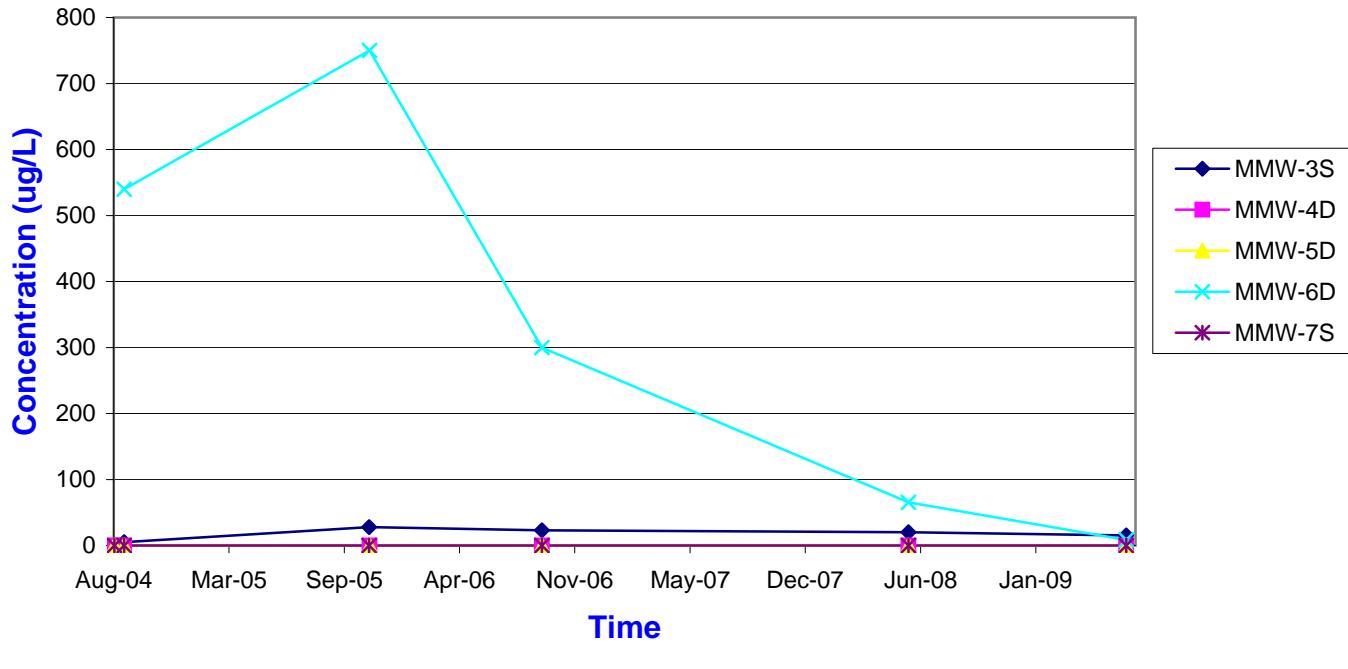
### MMW-6D



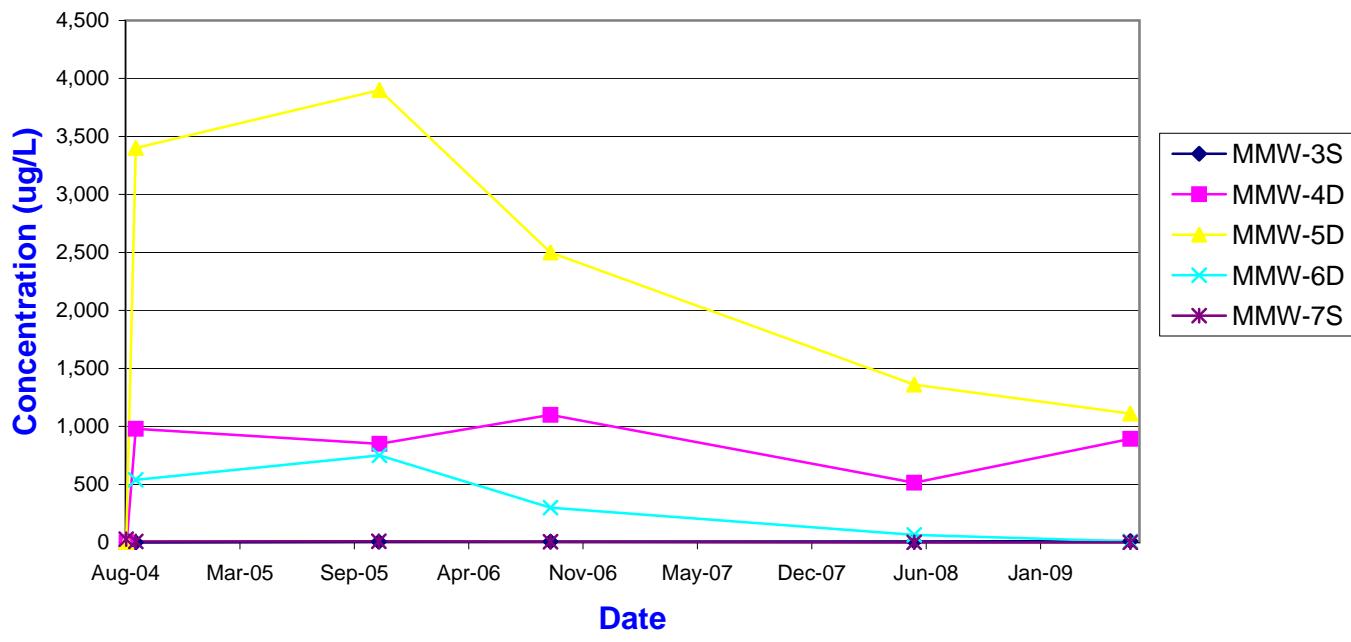
### MMW-7S



### TCE



### cis-1,2-DCE



### Vinyl Chloride

